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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1986

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

ON

H.R. 2959

AN ACT MAKING APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1986, AND FOR OTHER PURPOSES

PART 1 (Pages 1-372)

DEPARTMENT OF THE ARMY

Corps of Engineers—Civil

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

TENNESSEE VALLEY AUTHORITY

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1986

WEDNESDAY, FEBRUARY 20, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2:05 p.m. in room SD-192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Mattingly, Johnston, Byrd, and Burdick.

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

STATEMENT OF ROBERT K. DAWSON, ACTING ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

ACCOMPANIED BY:

- LT. GEN. E.R. HEIBERG III, CHIEF OF ENGINEERS, U.S. ARMY CORPS OF ENGINEERS
- MAJ. GEN. JOHN F. WALL, DIRECTOR OF CIVIL WORKS, CORPS OF ENGINEERS
- BORY STEINBERG, CHIEF, PROGRAMS DIVISION, DIRECTORATE OF CIVIL WORKS

OPENING REMARKS

Chairman HATFIELD. The hearing will come to order.

Today, we begin our hearings on the fiscal 1986 budget request for programs and activities under the jurisdiction of the Energy and Water Development Subcommittee.

This afternoon we will hear from Mr. Robert K. Dawson, the Acting Assistant Secretary of the Army for Civil Works; Lt. Gen. E.R. Heiberg, Chief of the U.S. Army Corps of Engineers; and Maj. Gen. John F. Wall, the Director of Civil Works of the Corps of Engineers.

General Heiberg, I want to extend a special welcome to you on your return to the Corps of Engineers. You, of course, are not a stranger to this subcommittee having testified as Division Engineer of the Ohio River Division and as Director of Civil Works. It is good to have you here today.

We also have at the table Dr. Bory Steinberg, Chief of the Programs Division in the Directorate of Civil Works. Dr. Steinberg, being the "budget man," will probably have most of the answers today.

Gentlemen, we have your detailed prepared statement which will be incorporated in the record. So, Mr. Dawson, you may proceed to highlight or summarize as you see fit.

Chairman HATFIELD. Before you do so, I would invite my colleague, Senator Johnston of Louisiana, to give any opening comments he may have.

Senator JOHNSTON. Thank you very much, Mr. Chairman.

I just would like to welcome Assistant Secretary Dawson; and General Heiberg, I believe this is your first time as Chief of the Corps testifying before us. You are an old friend and a proven expert on things in the Corps of Engineers which I consider to be, and have often said, the best of all Government programs.

I am happy to welcome General Wall, as well as Bory Steinberg.

Senator Stennis could not be here and also asked that his greetings be given to each of you.

Thank you, Mr. Chairman.

PREPARED STATEMENT

Chairman HATFIELD. Thank you, Senator.

[The statement follows:]

STATEMENT OF ROBERT K. DAWSON

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

INTRODUCTION

I am pleased to appear before your Subcommitte today to discuss the Army's Civil Works Program and the Fiscal Year (FY) 1986 Budget Recommendations. The Chief of Engineers, Lieutenant General E. R. Heiberg, III; the Director of Civil Works, Major General John F. Wall; and the Chief of Programs, Dr. Bory Steinberg, are with me and will assist in presenting the Army's testimony.

With your permission, Mr. Chairman, I would like to proceed by presenting an overview of my statement, and I request that General Heiberg be permitted to summarize his statement. We would then be available to answer the Subcommittee's questions. I also ask that my prepared statement and that of General Heiberg be placed into the record.

My statement addresses these topics: the FY 1986 budget including the context, policies, and directives that contributed to its formulation; the regulatory reform; ocean disposal; Federal Engineer; and, finally, items and projects of concern to the Administration and Congress.

CONTEXT OF THE CIVIL WORKS PROGRAM FOR FY 1986

President Reagan has stated: "Providing enough high quality water promptly to those who need it is a task that has confronted Americans since the earliest days of our national experience." We know that this Subcommittee continues its commitment to working with the States, local entities, and those private sector interests concerned with water development all across America on this never-ending challenge. It is in the spirit of working with you to rebuild the Federal-State partnership, so that we can resume water development efforts to avert water crises in the coming decades, that we present our testimony today.

The Department of the Army has done all that it could during the past four years to develop a new means to move forward with the Civil Works Program executed by the Corps of Engineers. For over a decade, this program had been in a state of retrenchment as the traditional terms for authorizing and implementing projects apparently lost favor with the American people and thus with the Congress. In spite of our efforts to date, we have been unable to convince Congress of the merits and value of a new charter for water resources development and management by the Federal Government in partnership with the States and local project sponsors. But I believe there have been lessons learned on all sides. The proposed FY 1986 program, of necessity, is premised on the enactment of new legislation, and I am hopeful that there will be the will and the wisdom to get the job done.

The legislation which we are proposing would accomplish three objectives: (1) authorize more than 60 projects, six of which are proposed as new contruction starts in FY 1986; (2) provide for substantial navigation cost sharing and cost recovery as well as new financial arrangements for other project outputs; and (3) provide new authorities to facilitate efficient Federal water development and management.

FISCAL YEAR 1986 BUDGET

Summary

The gross FY 1986 budget request for the Civil Works program totals $2.338 billion. Based on proposed legislation and/or voluntary agreements with local sponsors of new construction projects, we anticipate cash contributions from non-Federal project sponsors of new construction projects and receipts from navigation user fees to be $470 million. The requested Federal appropriations when enhanced by new non-Federal payments would provide the Corps of Engineers with total new program funding in FY 1986 of $2.808 billion. This amount is adequate to meet all scheduled program requirements. This compares favorably with appropriations of almost $2.8 billion in FY 1985 and demonstrates that, in the area of water resources development and management, it is possible to maintain our level of activity in spite of the necessity to reduce Federal spending.

Presidential Initiatives

I should point out that the FY 1986 budget reflects the reductions applied by the President to all domestic programs. These include: a freeze of requests at the FY 1985 level or FY 1986 request, whichever was lower; a 10% reduction in administrative expenses; and a 5% pay reduction, effective January 1, 1986. We have also reviewed the recommendations of the Grace Commission with a view to implementing selected ones that involve the Corps of Engineers. For example, we have proposed legislation which would result in increased user fees for navigation and general recreation. The budget request also provides funds for an increased number of studies and efficiency reviews, which will lead to productivity improvements involving both commercial and non-commercial activities.

CONSTRUCTION OF NEW PROJECTS

We continue to strive to re-establish a strong development program with cooperating States and local sponsors. In the FY 1986 Budget, we propose to initiate construction of 29 new projects including six which require construction authorization. Seventeen of these new construction starts are local flood control projects; five are deep-draft navigation projects; three are multiple-purpose reservoirs providing water supply, flood damage reduction, and recreation benefits; three are hydroelectric power projects, two of which involve installation of generation facilities at existing Corps reservoirs; and one is for replacement of locks and rehabilitation of the dam at one of the essential elements of the Inland Waterways System. While 13 of these projects had been included in previous budgets but were not acted upon by Congress, 15 are additional new construction projects based on newly negotiated financing arrangements. We believe these projects demonstrate further the willingness and ability of local sponsors to increase their financial participation in new project development when a strong, productive project exists, a project sure to provide a return on their financial investment. Also included as a new project is one inland navigation project, Gallipolis locks and dam on the Ohio River, which reflects the willingness of the Department to undertake navigation investments conditioned on a substantial, that is, 70 percent, financing contribution from the waterway beneficiaries to new project construction as well as to ongoing operation and maintenance expenses.

The 29 new projects represent a capital investment of slightly under $1.6 billion. Under the cost sharing arrangements we have negotiated with sponsors and inland navigation user fees, non-Federal funds would be used to finance almost $900 million, or about 57 percent, of total implementation costs. Under traditional arrangements, non-Federal funds would have been used to finance less than $200 million, or about 12 percent, of project implementation costs. With the Subcommittee's support, this investment could be underway as early as October and begin to produce benefits within one to two years.

COST SHARING POLICIES FOR NEW PROJECT CONSTRUCTION

General

Under the legislative proposal, some non-Federal contribution would be required for the construction of all Federal water resource projects. The amount of that contribution would be dependent on the ease with which the non-Federal sponsor could recover its capital investment through user fees or other benefit-based charges. For example, for fully vendible outputs, such as hydropower and municipal and industrial water supply, 100 percent recovery of costs, as is now required by law, has been relied on as a source of project financing. For outputs such as flood control and general recreation, which are not fully vendible, the level of cost sharing has been increased to provide a more equitable balance between Federal and non-Federal interests and yet, in our view, still encourage the advancement of meritorious projects. For navigation, a major share of the assigned costs for this output is proposed to be borne by non-Federal interests. The level of Federal funding being retained for navigation is sufficient to assure that a national interest is preserved in the development of deep-draft and shallow-draft channels and harbors along our coasts, on the Great Lakes, and on inland waterways.

The new funding arrangements we have negotiated for new construction start projects, and the generic cost sharing legislative authorities we are proposing, reflect the economic realities of water project development and the potential for increased beneficiary participation in project cost sharing and construction financing and the Federal budgetary realities the Subcommittee and we in the Administration face. Just as we have learned much in the process of negotiating new financing arrangements, we also have benefitted from the continuing dialogue with Congress, State and local governments, private financing institutions, and interest groups. Particularly noteworthy has been the range of options available to sponsors as they seek to minimize the cost of providing their share of project financing.

The overall objective of the Army's new construction starts initiative has been to develop policies which will maximize the amount of new water project construction that can be supported with the limited Federal funds which are available in the face of current budget deficits and changed spending priorities. In pursuing this objective, we have sought to accommodate the full range of project types and local sponsor capabilities, to finance productive projects.

Millions of American citizens, as users of project-provided goods and services, directly benefit from Federal water development. Millions more are indirectly affected by project development, as the benefits of development are diffused throughout the economic system by the ordinary operation of the market economy. The economic benefits of water projects provide a basis for non-Federal financing when the institutions are in place to allow a share of those benefits to be captured through user fees and other benefit-based charges.

Consistency

The new cost sharing objectives reflected in the Army's legislative proposals are specific to individual project outputs or purposes. We believe that it is essential to maintain consistency in cost sharing by project purpose, in the interest of treating all sponsors comparably. Nothing would detract more from the Department's credibility than to approach sponsors of similar types of projects on different terms. Indeed, a question frequently asked of District Engineers, as they approached potential sponsors, concerned the terms being offered to other sponsors.

Financial Assistance

We acknowledge, moreover, that Congress, as the ultimate reviewer of budget and legislative proposals, may want to consider unique circumstances which affect specific projects. It should be recognized that the Department has introduced new flexibility with regard to the amount that is to be financed by project sponsors during the construction period. Where projects produce the less-vendible outputs, such as flood control, there may be financing problems because of an inability to adequately capitalize project benefits; and the Department is prepared to address that need, a need which we recognize is of great concern to the Subcommittee. The approach in the generic legislation, as well as in the budgeting process, has been to look at the ability of sponsors to pay during the construction period, that is, in anticipation of receipt of benefits, as opposed to over time as benefits are actually received.

In formulating our FY 1986 new starts, we offered flexibility in financing to the sponsors of those projects with less-than-fully-vendible outputs. This flexibility, underscored in President Reagan's Water Policy letter of January 24, 1984 to Senator Laxalt, responds to the concerns of some members of Congress, Governors and others, as well as our own concern, by providing for reasonable financing arrangements for new projects while seeking consistency in cost sharing by project purpose.

Some members, we are sure, continue to be concerned that the new financing policies might favor wealthier regions and communities. They do not. The policies are tied to the flow of benefits produced by the project, not the wealth of the beneficiaries. Whenever a project is truly productive in the sense that its benefits exceed its costs, the local sponsor should be able to pay the required cost share as the benefits of the project are accrued. If the sponsor is willing to recover its portion of project costs through benefit-based fees, it can pay the requested share of project costs by capturing a share of the flow of project benefits.

Cost of Borrowing

In some instances, however, it may not be possible for the sponsor to pay all of its share during the construction period. Such difficulties may arise as a result of the community not being able to borrow at reasonable terms from the private capital market for a variety of reasons. By the refinements we have made in the new start program and in the generic cost sharing legislation which we are proposing, we have responded to that concern. When a sponsor of a project producing an output such as flood control is unable to provide its share of funds during the construction period, we will lend the sponsor Federal funds at an interest rate reflective of the cost of Federal borrowing for the period the loan is desired. This has the effect of making credit available to every flood control project sponsor at the cost of funds borrowed by the Federal Government from the private sector.

Because most sponsors have access to capital markets through the issuance of tax-exempt securities, it should not be surprising that only one sponsor has requested a possible Federal loan to finance its share, a 35 percent contribution, of the cost of obtaining its flood protection project. The Department believes that by placing an effective ceiling on the cost of raising capital to finance the local share of flood control and other less-than-fully-vendible outputs, we can assure that every sound project can be implemented in a timely way.

Financial Considerations

Congress also should be aware of the tremendous effort that water project sponsors are making to implement their projects in a timely and efficient way. These efforts are reflected not only in the stated commitments underlying new starts, but also in the news articles and in the letters we are receiving which recount the innovative means which sponsors are developing to implement and finance projects. No better demonstration of this impressive commitment by States and sponsors can be found than in the case of deep-draft harbor improvements. The Baltimore, Norfolk, Mobile, and New Orleans harbor and channel deepening projects are receiving unprecedented scrutiny as sponsors look for means to either stage project contruction or even modify the project plan so that implementation can proceed in accord with projected benefits and their financial capabilities. Potential sponsors have been participants in a series of four workshops on water project financing jointly sponsored by the Corps of Engineers and the Interstate Conference on Water Problems. Not only are sponsors desirous of moving ahead with development of new terms, but they, like we, have become aware of the great amount of expertise available to assist in obtaining new sources of capital on the most attractive terms possible.

OPERATION, MAINTENANCE, AND REHABILITATION

In spite of the new construction proposals we have made, expenditures for operation and maintenance of completed projects will continue to demand the largest share of budgetary resources, at least in FY 1986 and for the next few years. Starting in FY 1986, under the Army's legislative proposals, beneficiaries would pay a larger share of the cost of operation, maintenance, rehabilitation, and replacement. This would be done in four ways: (1) users of the locks and dams and channels of the inland waterways system would be required to pay a ton-mile fee which would cover about 70 percent of the annual operating and maintenance costs for the inland waterways; (2) local sponsors would be required to pay 70 percent of the annual costs for major deep-draft harbors with commercial traffic less than one million tons and for all shallow-draft navigation projects including the harbors on the inland waterways which, from a management standpoint, would no longer be considered part of the inland waterways system; (3) sponsors of deep-draft harbors and channels would pay the full cost of operation and maintenance but no more than 125 percent of the average cost per ton of traffic on or off loaded at the nation's ports; and (4) project sponsors would be responsible for the full cost of the operation, maintenance, rehabilitation, and replacement costs for all

newly constructed non-navigation projects, including reservoirs. Non-Federal sponsors will be encouraged to recover their share of these costs through user fees or any other mechanism they desire, so as to promote the principle of "beneficiary pay" as encouraged by the President's Water Policy Letter.

In proposing that a cap be placed on the contribution required of local sponsors for deep-draft navigation projects, we are attempting to place a substantial amount of responsibility for these costs on project sponsors while not unnecessarily disrupting existing trade patterns or existing competitive relationships among ports. The Army's legislative proposal, by not relying upon a nationwide uniform fee, also responds to the concern of low-cost ports that they not be expected to subsidize their competitors. It also meets the requirement of our international treaties that fees for harbor and channel maintenance reflect actual costs.

The deep-draft cost recovery proposal would require that about $175 million of the $423 million programmed for deep draft navigation work in FY 1986 be contributed by port authorities. The balance or $248 million would continue to be appropriated by Congress. Of the $406 million required in FY 1986 for the operation, maintenance, rehabilitation, and replacement of the inland waterways including work funded under the Flood Control, Mississippi River and Tributaries account and shallow-draft harbors and channels, about $213 million would come from inland waterway user fees and shallow-draft project sponsor contributions. The balance of $193 million would be appropriated by Congress.

It should be noted that the levels of cost recovery proposed for navigation are substantially less than those first proposed by the Army. This represents a compromise between the sound economic principle that the beneficiaries of these commercial activities bear their costs and the desire for an implementable proposal. Let me further add that, while we have worked hard to develop proposals that are economically and politically sound, we are certainly open to other proposals that will provide for similar levels of non-Federal participation in the funding of the Federal Water Program.

FEASIBILITY STUDY COST SHARING

Two-Phase Process

The Department of the Army has adopted a two-phase planning process as a management device to insure that full preauthorization studies are completed only when there is a high likelihood that a recommendation for a Federal project will result. This process has been in place for the past two years; and, during FY 1985, we intend to complete the first phase, that is, the reconnaissance phase, of over 30 studies.

These reconnaissance investigations, funded at full Federal expense, define the problems, formulate and evaluate potential solutions, identify likely project sponsors, identify the Federal interest, and lay out the plan of study for the feasibility effort. If there is evidence of a Federal interest in a justified and implementable solution to the problem, the study would be continued with joint Federal and non-Federal funding on a 50/50 basis and with up to one-half the non-Federal share having potential for being in the form of in-kind contributions.

Implementation

Because the Appropriations Committees have indicated that we should not implement activities with increased non-Federal financing, we have not implemented study cost sharing. However, before proceeding with the second phase, that is, the feasibility phase, of the survey studies previously initiated under the two-phase process, we are asking the would-be project sponsor to agree to share in those study costs incurred after cost sharing is implemented by the Department. These contributions would be provided only if the sponsor continues to view the investigation as productive and wishes to continue it. In return for this conditional commitment on the part of the local sponsor, we are funding both the Federal and non-Federal shares of the study cost to provide for efficient execution of the study. In other words, we have implemented the management process for the two-phase study program as if cost sharing were actually in place. This "market test" of the value of continuing the study eliminates the requirement for internal departmental review of the results of the reconnaissance investigations with its inherent delays, except in cases where there is a question regarding Federal interest in the proposed project.

Financial Ability

I have taken the time, Mr. Chairman, to review the two-phase planning process management because I know there have been questions raised about it. One concern that I have not addressed is the ability of a sponsor to raise its share of the study funds. In response, I would like to point out that if the sponsor cannot finance a study, it is unlikely that it would be able to participate financially in project implementation. I see the Department's proposal for study cost sharing as an effective device for insuring that Corps studies lead to projects which are cost-effective, responsive to local concerns, and in every way implementable. It is our earnest desire to go forward with full implementation of the two-phase study process by implementing feasibility phase cost sharing. We were pleased to see that both the House and Senate versions of the omnibus bill last year endorsed study cost sharing. We urge the Subcommittee to endorse this effort to increase the effectiveness of limited study funds.

FY 1985 APPROPRIATIONS

Report on Added Items

Prior to these hearings, I provided you a copy of a report, Mr. Chairman, that set out the current status of the disposition of the FY 1985 Appropriations. The report shows that, for the most part, we have been able to allot the increased or added amount, less savings and slippage, accomplish the requested action with a lesser amount, or allot sufficient funds for a study which will give us a basis for a decision on the desirability of proceeding. We would be pleased to address any special item of interest to the Subcommittee.

Cost Reductions

Section 2901 of the Deficit Reduction Act of 1984 (P.L. 98-369) requires Executive Branch cost reductions through management improvements in five areas: motor vehicles, travel, public affairs offices, reproduction, and consultant services. The reduction assigned to the Corps Civil Works program was $20.1 million for FY 1985. These reductions take the form of rescissions for FY 1985, which were transmitted to Congress with the FY 1986 Budget. The rescissions, by appropriation title, are: $2 million from General Investigations; $4 million from Construction, General; $8 million from Operation and Maintenance, General; $1 million from Flood Control, Mississippi River and Tributaries; $1.2 million from General Expenses; and $3.9 million from the Revolving Fund.

REGULATORY REFORM

We continue to be very active in the area of regulatory reform, and the FY 1986 budget request of $51 million is slightly higher than that appropriated for the last two years. Last October, we published final regulations which implemented the agreed to provisions of the lawsuit settlement with 16 environmental groups. Included as part of the settlement was the requirement for the public to provide notification to the Corps when activities are undertaken under certain nationwide permits. In addition, large fills above headwaters and in isolated waters no longer qualify for nationwide permit approval and must now have individual permits. These requirements provide additional environmental safeguards but do not hinder our overall goal of streamlining the regulatory program.

This spring, we hope to publish more rules. We are attempting to consolidate some of our previous regulations and include some additional procedures to reduce delays. We are also providing more guidance on the use of nationwide permits and an expansion of the overall nationwide permit program. Under these nationwide permits, we are now authorizing tens of thousands of activities a year without the processing of individual applications. Later this year, we intend to issue some remaining regulations covering such items as enforcement and an improved permit form.

We have made significant improvements in our interaction with the States. This past year we transferred to the State of Michigan the Section 404 program outside traditionally navigable waters. Because of onerous regulations and procedures, a lack of resources, or applicable law, no State previously had been able to take advantage of this transfer provision of the Clean Water Act. We are also working with the States to modify our nationwide permits to meet their individual State requirements. Some States have expressed concerns over the nationwide permit program, but we have made important progress by improving the States' understanding of this program and by adding regional conditioning to many nationwide permits. We have also made significant progress in building on the permit programs of various State and local governments. In over 35 States, we have been able to issue "State program general permits" which eliminate duplication that existed where the Corps and a State or local government had similar permit programs for minor activities.

OCEAN DISPOSAL

Dredging is essential to the Nation's economic well-being and it is imperative that this activity be conducted in a fiscally responsible as well as environmentally acceptable manner. I am particularly concerned about the trend to require disposal of dredged material at great distances in the ocean, in the absence of scientific evidence suggesting that there are benefits commensurate with the costs of such efforts. These cost increases can be quite significant. For example, over $40 million additional would be required in deepening costs alone at Norfolk Harbor if an ocean disposal site only seven miles further out to sea were used in lieu of the historically used site. There are instances where it is proposed to move much farther out to sea than merely an additional seven miles. Unless there is a scientific or technical basis for doing so, we believe it is unwarranted to incur the added costs for disposal of dredged material further offshore. To do this means fewer dollars for navgation benefits. As General Heiberg will discuss, the Corps together with the EPA has agreed to base such decisions on scientific data and are working to improve their predictive techniques.

WORK FOR OTHERS

As the Government's largest engineering organization, the Corps has undertaken an array of work for other Federal agencies in the interest of Government efficiency, as well as for States and local Governments and other countries. With the support of the Administration, we are supplying needed planning and engineering expertise and construction management capability to help those agencies complete their scheduled workload. While the provision of these services helps those agencies meet their program objectives, the work is important to the Army since it helps the Corps to retain, enhance, and broaden its technical expertise. I want to assure you that this supportive effort does not in any way distract from the Corps Civil Works mission, nor does it create inappropriate competition with private engineering firms. In all, we are devoting some 800 workyears of effort in response to the needs of slightly over 30 different entities.

PROJECTS OF CONCERN

Mount St. Helens

The Corps of Engineers is continuing to address the problems created by the eruption of Mount St. Helens. The feasibility report, addressing a permanent solution to these problems, accompanied by the report of the Board of Engineers for Rivers and Harbors and the proposed report of the Chief of Engineers, was distributed for State and agency review on January 11, 1985. The final report is scheduled to be forwarded to Congress this spring. The preferred plan consists of a single retention structure and associated downstream actions. Through continous monitoring, additional information will be obtained, during the continuation of planning and engineering process, concerning the rate and future magnitude of sediment deposition. Adjustments to the preferred plan will be made as may be indicated by newly acquired information. Another solution may be selected, such as a staged single retention structure or dredging, but only if there is compelling and convincing new evidence for doing so. Accordingly, concurrent analysis and design of a single-retention-structure, a staged-single-retention-structure, and dredging alternatives are continuing during Continuation of Planning and Engineering studies, which are scheduled for completion in December 1985.

The Corps is continuing to dredge the lower Toutle River and perform minor levee rehabilitation to counteract the currently expected sediment deposition in the Cowlitz River and to continue to provide a 100-year level of protection to the communities along the Cowlitz River. Funds are requested to continue this effort in FY 1986. The construction of a permanent outlet tunnel at Spirit Lake is nearing completion, with the initiation of lake drawdown scheduled for early in the third quarter of this fiscal year.

Section 202 Project

Construction of the structural measures for Williamson, Pineville, and Barbourville in FY 1985 is on schedule, and all project activities are being fully funded as directed by Congress. A contract for construction of a pump station and levee in Pineville will be awarded this spring, and construction of the Williamson levees and floodwalls is scheduled to begin in FY 1986. Construction of the Barbourville cutoff and detailed engineering and design of the Barbourville levees and floodwalls are continuing. Unanticipated additional planning efforts have delayed implementation of non-structural measures funded in the FY 1984 Urgent Supplemental Appropriations Act, Public Law 98-332. However, the Corps probably will begin acquiring floodplain properties and floodproofing individual structures in Williamson during the fourth quarter of FY 1985.

Funds have been appropriated for this project at a rate far in excess of the Corps ability to spend them; we anticipate to end FY 1985 with an unobligated carryover of $19.3 million. Pursuant to the specific instructions set forth in law, we are continuing development of a project costing hundreds of millions of dollars and which never has met the requirements of economic justification. All of this work, I might add, is being done at full Federal expense, unlike like other local protection projects in the nation, whether under currently proposed cost sharing of 35 percent or under traditional cost sharing where Congress has recognized that at least lands, easements, and rights-of-way should be provided.

Lock and Dam 26, Second Lock

Construction of the Lock and Dam 26 Replacement project is proceeding in three stages, and is on schedule. Stage I consists of the first 6-1/2 bays of the dam, which will be completed this fiscal year. A contract for Stage II, the 1,200 foot Replacement Lock, was awarded last September 28th. Stage III, the closure dam tying the Stage II Replacement Lock into the Illinois shoreline, is scheduled to be awarded in January 1988 and would complete the authorized replacement project.

The January 1988 award date is critical because, if a Second Lock were to be authorized and built, it would be at that date that constuction would logically have to commence; otherwise, the closure dam would be constructed to complete the authorized replacement project. In order to capitalize on a potential $95 million cost savings (October 1983 price levels) that could be realized by not having to construct the closure dam and later remove it to accommodate a second lock, it would be prudent to undertake this month the engineering and design of a second lock which would have to be authorized. The engineering and design would have to be undertaken now in order to start work on the plans and specifications which would have to be initiated around July 1986, if the January 1988 award date is to be met. Engineering and design can be undertaken within available funds under the Construction, General, Appropriation, justified by the anticipated savings from incorporating the second lock into the current construction schedule. A letter advising the Congress of our decision to undertake engineering and design has been sent to the appropriate committees.

Recovery of Past Water Supply Investments

We have made substantial progress in our initiative to increase the rate of recovery of past investments in municipal and industrial water supply storage. As explained in last year's testimony, one part of this initiative involves a series of reforms to recover a larger share of the real value of past Federal investments within the authority of the 1958 Water Supply Act, while not imposing unfair burdens on any beneficiaries of Corps water supply storage. Most non-Federal sponsors of water supply storage have been very cooperative with us in this regard. Over the past year, final water supply contracts have been recovered from five sponsors and draft water supply contracts from an additional four sponsors; all of these contracts are in accord with the new policy.

Within the last year, the Army also embarked on a water supply marketing initiative in an attempt to accelerate sales of about 1.4 million acre-feet of constructed but unsold water supply storage Nationwide. The first report from the Corps for this effort listed seven projects where we expect to sign additional water supply contracts within the next few years. An additional five projects also have been identified where interest in purchasing water supply storage in the near future appears to exist. Preliminary results from the marketing initiative indicate that about half the existing unsold storage will be contracted for within the next 15 years. This would bring the total amount of water supply storage under contract to almost 8.5 million acre-feet, or more than 92 percent of existing Corps municipal and industrial water supply storage Nationwide.

CONCLUSION

Mr. Chairman, in reporting to you on the complex issues and accounting inherent in any budgetary presentation, I have no desire to shift the Subcommittee's focus from the reality of the water problems facing our Nation and the need to improve the Nation's infrastructure in an efficient and timely way.

Your actions will have important and far reaching impacts on this Nation's well-being, and many citizens anxiously await revitalization of the Civil Works construction program. We all share the awareness of the deserving communities and individual citizens who are awaiting flood protection, harbor improvements, and other valuable services that can be provided by water projects. If something is not done soon to break the logjam, the history of the program for the last decade or so will be read as a testament to the inability of the Government to respond to new challenges in timely and responsible way. There can be revitalization in the water resources program in spite of the current Federal budget crisis. We all know that the budgeted new construction start proposals demonstrate that non-Federal interests are willing and able to contribute substantially more than they have in the past to receive the benefits of effective water resources development, and that there are ways to substantially increase the efficiency of program execution. There is no good reason remaining for delay.

Many of our budgetary proposals require new authorizations. I would hope that Members of the Subcommittee will urge their colleagues to act on these. Meanwhile, we ask the Subcommittee to support our efforts to initiate the authorized new construction projects on the terms we have negotiated with local sponsors, and also to endorse our two-phase preauthorization study process, including study cost sharing. We need your help. We fully recognize that without your support we cannot move forward to address these critical problems. We also know that with your help we can move ahead to solve pressing water resource development problems.

R-11 February 1985
1004D -

ARMY CIVIL WORKS PROGRAM
FY 1983-1986 RECOMMENDED NEW CONSTRUCTION STARTS
($ IN MILLIONS)

PROJECT TYPE	NUMBER OF PROJECTS	FY 1986 BUDGET REQUEST	TOTAL CAPITAL COSTS 1/	FEDERAL COST-SHARE		LOCAL COST-SHARE	
				TRADITIONAL	PROPOSED 2/	TRADITIONAL	PROPOSED 2/
FLOOD CONTROL	17	26.44	553.89	427.72	350.03	126.17	203.86
COMMERCIAL PORTS	5	8.55	242.11	201.01	102.90	41.10	139.21
HYDROPOWER	3	0.9	148.80	148.80	2.7	0	146.10
MULTIPURPOSE	3	6.20	259.10	230.70	113.65	28.40	145.45
INLAND WATERWAYS	1	1.35	370.00	370.00	111.00	0	259.00
TOTAL	29	43.44	1,573.90	1,378.23	680.28	195.67	893.62

1/ Costs are at 1 October 1984 price levels and include allowances for inflation through the construction period.
2/ Shares under the Proposed columns are based on assumption that funds from project sponsors, including port authorities, and the users of the Inland Waterway system will be paid on a "pay-as-you-go schedule as called for under proposed legislation.

R-26 February 1985
1004D -

ARMY CIVIL WORKS PROGRAM
FY 1986 RECOMMENDED NEW CONSTRUCTION STARTS
($ IN MILLIONS)

PROJECT TYPE/NAME	FY 1986 BUDGET REQUEST	TOTAL CAPITAL COSTS 1/	FEDERAL COST-SHARE		LOCAL COST-SHARE	
			TRADITIONAL	PROPOSED	TRADITIONAL	PROPOSED
FLOOD CONTROL						
Ardsley, NY	0.48	5.67	4.77	3.68	0.90	1.99
Chaska, MN	1.60	28.70	23.80	18.60	4.90	10.10
Clear Creek, TX	2.00	119.35	94.80	77.58	24.55	41.77
* Fountain Creek at Pueblo, CO	1.36	9.10	7.70	5.83	1.40	3.27
* Lake Wichita, Holliday Creek at Wichita Falls, TX	1.50	30.50	17.80	16.40	12.70	14.10
Moline, IL	1.88	24.33	23.00	15.81	1.33	8.52
Revere Beach, MA	0.70	9.10	4.55	4.55	4.55	4.55
Tamaqua, PA	2.12	11.04	10.70	7.18	0.34	3.86
* Town Brook, Quincy, MA	1.50	36.10	35.60	23.50	0.50	12.60
SUBTOTAL	13.14	273.89	222.72	173.13	51.17	100.76
COMMERCIAL PORTS 2/						
Freeport Harbor, TX (Deepening)	2.00	75.92	66.60	33.92	9.32	42.00
Ponce Harbor, PR	0.35	10.24	9.66	4.83	0.58	5.41
* Sacramento Deep Water Ship Channel, CA	1.30	106.60	85.10	43.50	21.50	63.10
* Savannah Harbor Widening, GA	2.50	22.75	14.65	7.35	8.10	15.40
SUBTOTAL	6.15	215.51	176.01	89.60	39.50	125.91
HYDROPOWER						
Town Bluff Hydropower, TX	0	20.00	20.00	0	0	20.00
MULTIPURPOSE						
Little Dell Lake, UT	3.00	107.90	79.50	52.25	28.40	55.65

PROJECT TYPE/NAME	FY 1986 BUDGET REQUEST	TOTAL CAPITAL COSTS 1/	FEDERAL COST-SHARE		LOCAL COST-SHARE	
			TRADITIONAL	PROPOSED	TRADITIONAL	PROPOSED
INLAND WATERWAYS 3/						
* Gallipolis Locks & Dam Replacement, OH & WV	1.35	370.00	370.00	111.00	0	259.00
TOTAL	23.64	987.30	868.23	425.98	119.07	561.32

1/ Costs are at 1 October 1984 price levels including inflation through the construction period.

2/ Data under Proposed columns are based on Army's proposed 50/50 cost-sharing.

3/ Data under Proposed columns are based on assumption that project is an increment to the existing Inland Waterway system and will be totally paid for by user fees under proposed legislation (30% Federal/70% non-Federal).

* Project requires authorization.

ARMY CIVIL WORKS PROGRAM
FY 1983/84/85 RECOMMENDED NEW CONSTRUCTION STARTS
($ IN MILLIONS)

R-8 February 1985
1004D -

FISCAL YEAR 83/84/85 1/	PROJECT TYPE/NAME 2/	FY 1986 BUDGET REQUEST	TOTAL CAPITAL COSTS 3/	FEDERAL FINANCING		LOCAL FINANCING	
				TRADITIONAL	PROPOSED	TRADITIONAL	PROPOSED
	FLOOD CONTROL						
83	Kahoma Stream, HI	3.0	23.9	17.6	15.5	6.3	8.4
83	Merced, CA	4.0	111.0	33.5	72.2	27.5	38.8
83	Virginia Beach Streams, VA	1.0	6.0	4.9	3.9	1.1	2.1
84	Bassett Creek, MN	2.5	37.4	31.8	24.3	5.6	13.1
84	Ellicott Creek, NY	1.0	22.9	13.8	13.8	9.1	9.1
84	Fairfield Vic. Streams, CA	1.2	28.1	15.1	15.1	13.0	13.0
84	San Luis Rey, CA	1.4	45.0	35.5	29.3	9.5	15.7
85	Pajaro River, CA	0.5	5.7	2.8	2.8	2.9	2.9
	SUBTOTAL	13.3	280.0	205.0	176.9	75.0	103.1
	COMMERCIAL PORTS						
83	Freeport Harbor, TX (No. Jetty)	2.4	26.6	25.0	13.3	1.6	13.3
	HYDROPOWER						
83	Bonneville Power Units, OR & WA	0.5	21.8	21.8	0.5	0	21.3
83	Strube Lake, OR	0.4	107.0	107.0	2.2	0	104.8
	SUBTOTAL	0.9	128.8	128.8	2.7	0	126.1
	MULTIPURPOSE						
83	Randleman Lake, NC	2.7	134.0	134.0	58.3	0	75.7
85	Cowanesque Lake, PA	0.5	17.2	17.2	3.1	0	14.1
	SUBTOTAL	3.2	151.2	151.2	61.4	0	89.8
	TOTAL	21.1	586.6	510.0	254.3	76.6	332.3

1/ Projects designated FY 1983 were included in the FY 1983 new starts budget amendment submitted to Congress by the President on May 25, 1982.

2/ Two projects, Bradley Lake, AK and Bodega Bay, CA which were budgeted as new starts in prior years, do not appear on this list because local sponsors have elected to proceed with construction without Federal participation. In addition, Davenport, IA is not budgeted in FY 1986 due to lack of local support.

3/ 1 October 1984 prices inflated through the construction period.

CIVIL WORKS PROGRAM FOR FISCAL YEAR 1986

Chairman HATFIELD. You may proceed.

Mr. DAWSON. Thank you very much, Mr. Chairman.

I am very pleased to appear before your subcommittee today to discuss our program and our 1986 budget recommendations. You have already mentioned General Heiberg, General Wall, and Dr. Steinberg who will assist in our testimony.

As you directed, Mr. Chairman, I will proceed by presenting a summary and overview of the statement and request that General Heiberg be permitted to summarize his statement. Then we would be available to answer the subcommittee's questions.

President Reagan has stated:

> Providing enough high-quality water promptly to those who need it is a task that has confronted Americans since the earliest days of our national experience.

We know that this subcommittee continues its commitment to working with the States, local entities, and those private-sector interests concerned with water development all across America on this never-ending challenge. You will spend many hours in the weeks ahead hearing the testimony of many such people. It is in the spirit of working with you to rebuild the Federal-State partnership so that we can resume water development efforts to avert water crises in the coming decades that we present our testimony today.

POLICY ISSUES

The Department of the Army has done all that it could during the past 4 years to develop a new means to move forward with the Civil Works Program executed by the Corps of Engineers. For over a decade this program had been in a state of retrenchment as the traditional terms for authorizing and implementing projects apparently lost favor with the American people and, thus, with the Congress.

In spite of our efforts to date, we have been unable to convince Congress of the merits and value of a new charter for water resources development and management by the Federal Government in partnership with the States and local project sponsors. But I believe there have been lessons learned on all sides. The proposed fiscal year 1986 program, of necessity, is premised on the enactment of new legislation, and I am hopeful that there will be the will and the wisdom to get the job done.

I might note, Mr. Chairman, this morning we were able to get OMB clearance and have delivered to the Hill an omnibus bill which, to my knowledge, is the first such legislative offering by any administration that contains over 60 projects as well as cost-sharing proposals. Copies of that have been made available to you, and I am sure we will be talking further after you have looked into that more carefully.

FISCAL YEAR 1986 BUDGET

The gross fiscal year 1986 budget request for the Civil Works Program totals $2.338 billion. Based on proposed legislation and/or voluntary agreements with local sponsors of new construction projects, we anticipate cash contributions from non-Federal project sponsors of new construction projects and receipts from navigation user fees to be $470 million.

The requested Federal appropriations, when enhanced by new non-Federal payments, would provide the Corps of Engineers with total new program funding in fiscal year 1986 of $2.808 billion. This amount is adequate to meet all scheduled program requirements and demonstrates that in the area of water resources development and management, it is possible to maintain our level of activity in spite of the necessity to reduce Federal spending.

CONSTRUCTION—NEW STARTS

Let me move quickly ahead to talk about the 29 new projects we have included in the President's budget, including 6 where we require construction authorization. Of these projects, 13 have been included in previous budgets but 15 are new construction projects based on newly negotiated financing arrangements.

We think these projects, Mr. Chairman, demonstrate further the willingness and ability of local sponsors to increase their financial participation in new project development when a strong, productive project exists.

Rather than giving any specific examples, I think I will move ahead to point out that these 29 new projects represent a capital investment of slightly under $1.6 billion. Under the cost-sharing arrangements we have negotiated with sponsors and inland navigation user fees, non-Federal funds would be used to finance almost $900 million, or about 57 percent, of the total implementation costs. Under traditional arrangements, non-Federal funds would have been used to finance less than $200 million, or about 12 percent, of project implementation costs.

With the subcommittee's support, this investment of $1.6 billion could be underway as early as next October and begin to produce benefits within 1 to 2 years. We see no reason to deny the project beneficiaries these benefits one day longer than they have already encountered.

COST-SHARING POLICIES

Under the legislative proposal I have sent to the Congress this morning and that I mentioned earlier, some non-Federal contribution would be required for the construction of all Federal water resource projects. The amount of that contribution would be dependent on the ease with which the non-Federal sponsor could recover its capital investment through user fees or other benefit-based charges.

The new cost-sharing objectives reflected in the Army's legislative proposals are specific to individual project outputs or purposes. We believe that it is essential to maintain consistency in cost-sharing by project purpose in the interest of treating all sponsors comparably.

We acknowledge, moreover, that Congress as the ultimate reviewer of budget and legislative proposals may want to consider unique circumstances which affect specific projects.

OPERATION, MAINTENANCE, AND REHABILITATION

Moving forward here, in spite of the new construction proposals we have made, expenditures for operation and maintenance of completed projects will continue to demand the largest share of budgetary resources, at least in fiscal year 1986 and for the next few years.

Starting in fiscal year 1986, under the Army's legislative proposals, beneficiaries would pay a larger share of the cost of operation, maintenance, rehabilitation, and replacement. This would be done in a number of ways outlined specifically in my complete statement. But in all mechanisms, non-Federal sponsors will be encouraged to recover their share of these costs through user fees or any other mechanism they desire, so as to promote the principle of beneficiary pay as encouraged by the President's water policy letter of January 24, 1984.

FEASIBILITY STUDY COST SHARING

My complete statement, Mr. Chairman, talks in some detail about the two-phase planning process, and I would just mention briefly that it is our earnest desire to go forward with full implementation of the two-phase study process by implementing feasibility phase cost sharing.

We were pleased to see that both the House and Senate versions of the omnibus bill last year endorsed study cost sharing. We urge the subcommittee to endorse this effort to increase the effectiveness of limited study funds.

REGULATORY REFORM

We would like to mention just briefly an area that I treat in some detail in my statement, and that is regulatory reform.

We are very proud, Mr. Chairman, of the progress we have made in expediting the permit application process in the Corps of Engineers. We feel we have done that without sacrificing environmental safeguards. We have reduced the average processing time from about 140 days down to about 75 days.

OCEAN DISPOSAL OF DREDGE MATERIAL

I would like to mention briefly the problem of ocean disposal. General Heiberg will go into this in more detail.

Dredging is essential to the Nation's economic well-being and it is imperative that this activity be conducted in a fiscally responsible as well as environmentally acceptable manner. I am particularly concerned about the trend to require disposal of dredged material at great distances in the ocean, in the absence of scientific evidence suggesting that there are benefits commensurate with the costs of such efforts.

WORK FOR OTHERS

Moving quickly to our work for others, which General Heiberg will go into more detail on, the Corps has undertaken work for other Federal agencies in the interest of Government efficiency as well as for States and local governments and other countries. In the interest of time, let me simply say that I support these efforts wholeheartedly.

CONCLUSION

Mr. Chairman, you and your members are more aware than anyone of the reality of the water problems facing our Nation and the need to improve the Nation's infrastructure in an efficient and timely way.

Your actions will have important and far-reaching impacts on this Nation's well-being, and many citizens anxiously await revitalization of the Civil Works Construction Program. We all know about the deserving communities and individual citizens who are awaiting flood protection, harbor improvements, and other valuable services that can be provided by water projects. I know you will be hearing directly from many of these people in the weeks immediately ahead.

If something is not done soon to break the logjam, the history of the program for the last decade or so may be read as a testament to the inability of the Government to respond to new challenges in a timely and responsible way.

There can be revitalization in the water resources program in spite of the current Federal budget crisis. We all know that the new construction start proposals in our budget demonstrate that non-Federal interests are willing and able to contribute substantially more than they have in the past to receive the benefits of effective water resources development, and we know that there are ways to substantially increase the efficiency of program execution. In my judgment, there are no remaining good reasons for more delay.

Many of our budgetary proposals require new authorizations. I would hope that members of this subcommittee would consider urging their colleagues to act on these.

Meanwhile, we ask the subcommittee to support our efforts to initiate the already authorized projects on the terms we have negotiated with local sponsors and also to endorse our two-phase preauthorization study process, including study cost sharing.

We need your help, Mr. Chairman, and we fully recognize that without your support, we cannot move forward to address these critical problems.

We also know that with your help we can move ahead to solve pressing water resource development problems.

Mr. Chairman, thank you very much.

Chairman HATFIELD. General Heiberg?

STATEMENT OF GENERAL HEIBERG

General HEIBERG. Mr. Dawson has identified the policies and objectives directing the development of our program and the fiscal year 1986 budget. I will talk briefly about the expected results and directions that will be taken for our program. But first, I would like to review very briefly some of our accomplishments, what we have done with the money we have gotten from the Hill.

PROGRAM SUMMARY

Outlays for fiscal year 1984 totaled over $3 billion, with both the construction and the project operation and maintenance programs exceeding $1 billion each. Based on appropriations of almost $2.8 billion for this fiscal year, 1985, plus carryover, we are anticipating that the outlays this year will again exceed $3 billion.

JOBS ACT FUNDS

During fiscal 1984, essentially all remaining Jobs Act funds were obligated, maximizing the number of jobs generated and awarding contracts in virtually every State. Some 22,000 jobs were created by the award of over 700 contracts in 47 States. As you know, the work was concentrated on worthwhile projects, largely major flood control and navigation projects.

Our Construction General Program continues to decline. This year, 127 regular construction projects are being funded together with several other types. Of particular significance is the opening of the Tennessee-Tombigbee Waterway to navigation traffic about a year and a half ahead of schedule. We look forward to celebrating that opening in 3 months.

Our activities and outlay levels for our Operation and Maintenance Program in fiscal year 1984 and fiscal year 1985 are about the same, over $1.3 billion. We did do some emergency dredging in Galveston Harbor as a result of Hurricane Alicia and on the lower Mississippi River because of low water conditions.

FLOOD DAMAGE PREVENTION

During fiscal year 1984, the Nation's investment in Corps dams, levees, and flood protection projects returned dividends by preventing billions in flood damages. Projects were particularly effective in the mid-Atlantic and New England areas, where record estimates of annual flood damages prevented were reported, and in the Pacific Northwest, in the Missouri River basin, and in the lower Mississippi River Valley area.

This Nation should take a great deal of pride in these projects, not only by the rather dry "damages prevented" account, but in the continuing economic good performed in hundreds of communities, and indeed, across the United States, as well as in the quality of life in communities free of fear from rampaging rivers. And we also stand ready to extend Corps help by providing emergency response assistance under our Public Law 84-99 emergency authority as well as under FEMA's authority.

I picked out of my in basket this morning thanks from Idaho for some work General Robertson and his folks did up there.

FISCAL YEAR 1986 BUDGET

Let me turn to the fiscal 1986 program the President has sent up. The Army's budget asks for $2.338 billion in general appropriations for the Civil Works Program. That request, together with the contributions that would be forthcoming under existing legislation and the Army's desired legislation, would provide new funds amounting to $2.808 billion for the Civil Works Program.

This is within a few million dollars of the funds provided this fiscal year. That budget is adequate to meet our program requirements, assuming that the projected $470 million in required non-Federal contributions are received in a timely manner. Included in that total is some $403 million that are to be derived from navigation interests, with collection of such funds dependent upon enactment of new legislation.

COST-SHARING POLICIES

Let me highlight selected key aspects. Funding of the 29 new construction starts reflects the Department of the Army's cost-sharing and financing proposals accepted by the the projects' sponsors.

Bills addressing the issue of cost sharing were developed during the last Congress by the authorizing committees in both Chambers and since have been reintroduced in this session. Both bills endorse the basic goal of increased non-Federal financial participation in project development and operation and maintenance.

I have been around watching the water resource scene for a while and I feel that endorsement of more user financing by both Chambers reflects what most people involved in water resource users now accept—a higher level of cost sharing by identified users.

I recognize there are some that don't like that, but that is where I see we are. Of course, what remains at issue is the extent of non-Federal cost sharing and financing and also at issue indirectly is the role of the Federal Government in the construction, operation, and maintenance of projects, with valuable outputs and benefits, most notably commercial navigation, recreation, hydropower, municipal and industrial water supply, and hurricane protection.

Since the potential for compromise and resolution of these issues appeared reasonably good—and I hope that means this year—we continued this past year to negotiate for the joint development of additional projects with those sponsors who are voluntarily willing to increase their share of project costs. In all cases, the agreements with the sponsors provide for the non-Federal share to be adjusted to reflect whatever cost-sharing provisions are agreed to between the President and the Congress. Hopefully, this provision will encourage approval for us to move ahead and once again develop a viable construction program. Otherwise, the entire planning system will grind to a halt, which I don't think anybody wants.

OPERATION AND MAINTENANCE, GENERAL

Over $1.3 billion is being programmed in fiscal year 1986 for work normally funded under our O&M account, about the same as last year's appropriation. The budget request of $961 million has to be augmented by user fee receipts to be collected and deposited in existing trust funds to help defray our costs for the operation and maintenance of navigation projects.

The small increase in resources this year is attributable to both the full operation of the locks and dams on the Tennessee-Tombigbee Waterway, and that is good news, and funding required for several major rehabilitation projects. However, the Presidential reductions applied to all domestic programs required us to defer some maintenance of lower priority for a year. These maintenance activities included some dredging at harbors with less than 25,000 tons of commercial traffic annually and some project maintenance that had been previously programmed for accomplishment in fiscal year 1986. What I am saying is we are tightening our belt a notch.

FLOOD CONTROL—MISSISSIPPI RIVER AND TRIBUTARIES

For the MR&T program, the $269 million budget request, together with $33 million in proposed user fee receipts, provides for normal operation and maintenance of the MR&T project and for continued survey and construction schedules consistent with prior-year performance and historic funding experience. One new start is included in the MR&T budget request, the start of planning and engineering on Nonconnah Creek project in Mississippi and Tennessee.

PROGRAM FINANCING

As I said earlier, what really differs from past budget submissions is how our workload is to be funded. The non-Federal share of costs for various ongoing and future activities will have to be increased and made available to us on a pay-as-you-go schedule. The projected increases in non-Federal contributions reflect the basic objective of the beneficiaries paying a larger share of project costs.

The requirement for increased cost sharing by local interests will bring about some significant changes in our program. There is a strongly held view or perception that cost sharing earlier in the study process does help test projects before they go too far to be stopped, which is more painful later.

In short, both the Federal Government and the sponsor put some money, to include study money, up front.

Just as important is the fact that the reality of the projects' outputs as reflected by the willingness to cost share should assure that we are working on the priority problems within each region of the country.

I do not apologize for past studies where the Corps, with Federal funding, has provided its water resource expertise on problems that could not have been easily done by local sponsors, most involving the crossing of State lines, for example. The urban water resources studies were one class of these. We never expected them to lead to Federal construction. But particularly with the tight budget constraints, we simply cannot afford to do this type of work now.

By testing financial capabilities, this should encourage implementation of the plan which produces the greatest benefits at a cost that is affordable. This change should result in a future emphasis on more modest projects that are more carefully tailored to the basic needs and financial capabilities of the sponsor and, where feasible, to the construction phasing of a project's separable elements.

MANPOWER LEVELS

The Corps work-years ceiling for fiscal year 1985 is essentially the same as that for fiscal year 1984. For fiscal year 1986, our ceiling will be about 250 less. While we have been basically able to accomplish our program within our reduced ceilings, projections of future workloads indicate a real potential for shortfalls. If we see a Water Resources Development Act and restoration of our construction program, then we will have significant increases in the areas of planning and engineering and construction management. I frankly hope we have that kind of a problem. We have a lot of work in the pipeline. If we do see an authorization bill that becomes law, we will have to find areas where the workload can be carried out more efficiently. I do not intend to run to the Office of Management and Budget for more spaces, regardless of what passes.

We are in the process of examining efficiencies now, by evaluating many of our activities to determine the best procedure for getting the job done and, when feasible, to see if private industry can deliver the same services at a lower cost.

CORPS DREDGING FLEET

Mr. Dawson said I would say a word about dredging, so let me talk about that for a moment.

In general, industry has responded well to the national dredging requirements, including the Great Lakes area, where many of the jobs previously performed by hopper dredges are being accomplished with nonhopper equipment.

Accordingly, we are now down to the minimum fleet level of four hopper dredges and are operating eight nonhopper dredges, including one cutterhead, three sidecasters, and one special-purpose dredge. Furthermore, we have successfully tested our reserve fleet program by activating an industry dredge to perform some emergency dredging in the entrance channel to Mobile Harbor. We gave the *Eagle I*, a dredge owned by the Bean Co. in Louisiana, essentially a 2-day notice to get over and start dredging in Mobile under this program, and they did a good job.

DISPOSAL OF DREDGED MATERIAL

As Mr. Dawson indicated earlier, the concern over disposal of dredged material is really plaguing us. This disposal problem is what I consider the No. 1 problem in the management of our National Dredging Program today.

For example, in many of our coastal areas and some of the inland areas we are approaching a crisis situation in locating required new upland sites which are both environmentally acceptable and within a reasonable haul or pumping distance from maintenance dredging activities.

However, extensive scientific research clearly indicates that over 90 percent of the sediments we dredge each year for navigation projects pose no significant threat to the environment. In spite of this fact, there continues to be a perception by some parts of the public that all dredged material is contaminated. Those fears are causing our close-in, open water sites to be closed. We have to move farther and farther offshore.

The Corps has developed careful disposal management techniques which preclude the potential contaminants from entering the ecosystem. Moreover, we are continuing to assign high priority to research and development on all environmental facets of our dredged material disposal activities. In addition, we have developed a comprehensive and scientifically based dredged material assessment and disposal management study system which will be valuable for future studies relating to dredge and fill issues.

FIELD VERIFICATION PROGRAM

Key to this effort is a Cooperative Field Verification Program involving the Corps' New England Division, our Waterways Experiment Station, and the EPA, which has been established to evaluate the three basic alternatives of open water disposal, upland disposal, and wetland creation. This field study will provide the first opportunity for direct comparison of the environmental consequences by using the same dredged material under different disposal conditions. Test results from the field studies will be compared to laboratory predictions to verify the accuracy of predictive methods that both agencies feel should be used in evaluating disposal alternatives. I might add that we are sharing this information with nations and organizations overseas, both giving to them what we have learned and learning from them what they have to give. I think we are on the right path, but we still aren't where we ought to be. I felt I ought to tell you that.

OVERVIEW OF THE CORPS OF ENGINEERS

Mr. Chairman and members of the committee, I am glad to be back after being in a couple other jobs the past 2 years. It is a pure delight to return to the Corps of Engineers and to our vital water resource mission. Let me tell you what I have found the last few months.

Those water resource projects are serving our Nation well, and the Corps people at our 540 lakes, 260 locks, and at the hydroplants that make us the primary Federal power producer are making all of us proud. I appreciate Senator Johnston's words there.

Those Civil Worker employees paid by funds you approve are doing a responsible, even-handed job in carrying out a regulatory program greatly streamlined over the last few years—a truly good news story.

Those colonels who run our 36 stateside districts are the Army's best. While they manage our Civil Works Program, they are learning how to manage huge construction contracts we would need if we have to go to war.

We have a huge, much-needed military program, which we are not reporting on here. It is the biggest since 1942 and involves work for both the Army and the Air Force. The Corps civilian employee I referred to, passes back and forth between the military and Civil Works Program, and occasionally works for other agencies. Sometimes he does all that in the same day. It is an efficient, sensible marriage of our water and defense responsibilities, as well as the work for other Federal agencies.

I wear a pair of castles on my lapels that Douglas MacArthur was given back in 1903 when he graduated from West Point. These are gold and have General MacArthur's initials on the back. Twenty-nine years after he pinned on those castles, and had since taken them off and was then a four-star general and Chief of Staff of the Army, he said—by this time it is 1932, the year I was born—

> . . . Personnel for river and harbor development. . . . This particular activity, administered with great success for many years by the Army Engineers, furnishes the officers of the Corps with the finest possible peacetime training for the manifold construction, engineering and procurement tasks that devolve upon them in time of war.

That is still true today. I have had the opportunity to explain that marriage of water resources with defense to many officials since I have come back to the Corps, and I wanted to reaffirm to this committee our commitment to do both tasks well. Part of that has been because of some conversation about the Bureau of Reclamation and the Corps of Engineers.

I have talked to each one of our 40 district engineers, our 14 division engineers, and you will be listening to them, and our four lab commanders and have visited many of our sites. I have looked at the completed work on the Tennessee-Tombigbee Waterway. I inspected the work ongoing at locks and dam 26, the Old River Auxiliary Control Structure, and the first two locks on the Red River Waterway, as well as a host of other existing projects. Together with the U.S. construction industry, your investments in the past are doing well. I am proud of what we have been doing in water resources.

Now, Mr. Chairman, I have been playing catchup ball the last 5 months. I am very glad to have the recent experience of the three gentlemen to my right to help me answer your questions.

[The statement follows:]

STATEMENT OF LT. GEN. E. R. HEIBERG III

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

INTRODUCTION

Mr. Dawson has identified the policies and objectives directing the development of our program and the FY 1986 budget. I will expand on those objectives by discussing the expected impact on the funding and directions that will be taken for various activities within our program. However, I first will review the accomplishments of the past and current years and then provide more detailed information on the FY 1986 budget. A table summarizing the funding levels of the individual appropriation titles for the period FY 1984-1986 inclusive is attached for the Subcommittee's reference. I also will report on the status of our dredge fleet and dredging program, certain proposed legislation that should be of interest to this committee, and our responsiveness in developing our part of the Nation's infrastructure.

PROGRAM IMPLEMENTATION OF THE PAST TWO YEARS

OVERVIEW

Outlays for FY 1984 totaled over $3 billion, with both the construction and the project operation and maintenance programs exceeding $1 billion each. Based on appropriations of almost $2.8 billion for FY 1985 plus carryover, we are anticipating that the outlays once again will exceed $3 billion.

During FY 1984, essentially all remaining Jobs Act funds were obligated. The results reflected our objectives of maximizing the number of jobs generated and awarding contracts in virtually every state. Overall, some 22,000 jobs were created by the award of over 700 contracts in 47 states. About 60 percent of Construction, General funds were used for work on major flood control and navigation projects, and almost a third was used on projects under our Continuing Authorities program. Almost three-fourths of Operation and Maintenance funds were used on navigation projects and, in the Mississippi River and Tributaries account, more than 90 percent of Jobs Act funds were used for repair and restoration of flood control projects.

Construction Program

Under our Construction, General program in FY 1984, work continued on 143 specificially authorized projects, 14 major rehabilitation projects, and one dam safety assurance project, with five others funded for only engineering and design. Completions included: two navigation projects, four flood control projects, one beach erosion control project, and three major rehabilitation projects. In FY 1985, 127 regular construction projects are being funded together with 11 major rehabilitation projects and one dam safety assurance project. Again, five projects are being funded for engineering and design, with 19 projects scheduled for completion. The completions include: three navigation projects, eight flood control projects, one bank protection project, one beach erosion control project, one multiple-purpose hydropower project, and five major rehabilitation projects. Of particular significance is the opening of the Tennessee-Tombigbee Waterway to navigation traffic approximately 18 months ahead of schedule. The Waxler Towing Company's four-barge tow, containing 64,000 barrels of petroleum valued in excess of $2 million, departed New Orleans on 9 January 1985, and arrived at its destination, Sheffield, Alabama on the Tennessee River, on 17 January 1985. In all, the river miles traveled by the tow was 820 miles, a reduction of some 335 miles over the traditional route via the Mississippi River.

Project Operation and Maintenance Program

The scheduled activities and outlay levels for the Corps operation and maintenance program in FY 1984 and FY 1985 are essentially the same — over $1.3 billion. Operation and maintenance of over 330 harbors and the inland waterways are programmed for accomplishment in FY 1985 at a level consistent with their commercial traffic requirements, with an average annual dredging requirement of about 255 million cubic yards for the two year period. Some emergency dredging was done in FY 1984 in Galveston Harbor as a result of Hurricane Alicia and on the Mississippi River, Baton Rouge to the Gulf, as a result of low water conditions. In addition, four waterway projects are in caretaker status in FY 1985; the extent of commercial traffic moving on these waterways precludes any increase in the level of operation beyond the caretaker status.

I would like to mention one of these caretaker projects in particular - Locks & Dams 5 through 14 of the Kentucky River navigation system. The last full year of operation of these 10 locks was FY 1981. In FY 1982, only five of the 10 locks were operated on weekends for recreational boating during the summer. Since then we have discontinued the operation of all 10 locks and dams. During the ensuing period, however, we have sought to transfer ownership of those locks and dams to the Commonwealth of Kentucky. State ownership would enable this project to be managed in ways which are more responsive to local and regional needs. With the assistance of Congressman Hopkins and Governor Collins it now appears that we will attain that goal. An interim operating agreement will provide a smooth transition from Federal to State control. This agreement provides that the Corps will make such repairs as are necessary to make the locks operational. Upon execution of this agreement these repairs will be initiated and, when completed sometime this spring or early summer, the State will begin operating the locks at its own expense. During this transition period, which will run until October 15, 1988, we will retain some responsibility for maintenance and will assist in training state employees in the operation and maintenance of the facilities. At the end of the transition period, the State will assume full ownership and all operation and maintenance responsibilities for the 10 locks and dams. A report and legislative proposal recommending that the Federal Government divest itself of any interest in Locks and Dams 5 through 14 by amending PL 84-996 is being processed now to permit transfer of title to the State.

The operation and maintenance of 352 flood control and multiple-purpose power projects continues at a level slightly above that for FY 1984. The FY 1983 Jobs Act gave us an opportunity to accomplish needed maintenance work, most of which was completed in FY 1984.

Studies Program

In our studies program funded under the General Investigations account, actions by the Division Engineers were completed on 67 preauthorization reports in FY 1984. We expect to complete action on the reconnaissance phase of about 30 studies and on 55 final preauthorization reports in FY 1985. In addition, the follow-on planning and engineering work is being funded for 64 projects in FY 1985, part of the 86 such projects which have been funded under our Continuation of Planning and Engineering (CP&E) program since it was initiated with Congressional support in FY 1982. The CP&E work on 46 of the 86 projects will be completed by the end of FY 1985.

Under our Review For Deauthorization program, 469 projects have been deauthorized to date, based on recommendations contained in the first eight annual reports printed by the Congress. The ninth and tenth annual reports recommending the deauthorization of 15 projects are currently under review by states and agencies. Work is continuing under this program and we expect to complete 39 more such reviews in FY 1985.

Flood Damage Prevention and Emergency Response Activities

During FY 1984, the Nation's investment in Corps dams, levees, and flood protection projects returned dividends by preventing billions in flood damages. Projects were particularly effective in the mid-Atlantic and New England areas, where record estimates of annual flood damages prevented were reported. Additionally, Corps projects were very efficient in reducing flood damages in the Pacific Northwest, and in the Missouri River Basin in FY 1984. Once again, the Lower Mississippi River Valley projects worked well in avoiding extensive flood damages in Louisiana and Mississippi.

In addition to the flood damages prevented by Corps projects, emergency response activity also was highly effective. During FY 1984 and the first quarter of FY 1985, the Corps has provided extensive assistance to states and local entities in response to widespread flooding, as well as other types of emergencies and disasters. This assistance has been in the form of emergency operations at Corps projects and direct assistance under our Public Law 84-99 emergency authority. In addition, the Corps has provided assistance under FEMA's Public Law 93-288 authority. During this period, there have been 39 major disaster declarations and five emergency declarations which have affected all or parts of 31 states and territories. Lesser emergencies in the same states and in other states have required Corps assistance.

In Idaho, the Corps provided assistance in response to changed streamflow conditions due to an earthquake and major ice jam problems. In addition, well-above-normal snowpacks across the west resulted in major flood problems during the spring melt in many of those basins with no natural outlets (Great

Salt Lake Basin, Utah; Humboldt River Basin, Nevada; Malheur Lake, Oregon; and Mud Lake, Idaho) and in the Snake and Colorado River basins. A repeat of some of these same problems may occur again this year, as early snowfalls in the Pacific Northwest, the Great Basin, and the Upper Colorado River basin have been well above normal and are projected to continue.

Record to near-record flooding occurred along portions of the middle Missouri River, especially its tributaries in Nebraska, Kansas, South Dakota, Iowa, and Missouri. Almost every state east of the Mississippi River suffered with problems from severe storms and widespread flooding. In addition, tornadoes caused havoc in many states, and coastal storms, including Hurricane Diana, severely impacted several East Coast states. Major damage occurred in Arizona, New Mexico, and Oklahoma due to flash flooding.

Currently, the Corps is assisting Idaho with ice jam flood problems. In Utah, advance measures assistance is being evaluated to supplement State and local efforts to respond to the projected near-record levels on the Great Salt Lake. In addition to the above normal early snowpack across most of the west, wet ground conditions and above-normal streamflows exist in large sections of the eastern two-thirds of the country. With these conditions and long-range predictions calling for above-normal precipitation across most of the country, a high potential exists for widespread flood problems again this year.

Currently, about $8.5 million remain in the Emergency Fund. However, commitments for completed emergency actions and requests that are currently being processed will utilize $7.5 million by the end of the winter. Identified potential requirements would deplete the remaining funds. Should significant flooding develop, it may be necessary to temporarily utilize funds from other flood control appropriations to meet the emergency response needs.

FISCAL YEAR 1986 PROGRAM

SUMMARY

We are requesting $2.338 billion in general appropriations for the Civil Works Program in FY 1986. That appropriation request, together with the contributions that would be forthcoming under existing legislation and the Army's proposed legislation, would provide new funds amounting to $2.808 billion for the Civil Works program. This compares with $2.799 billion in Federal funds and an estimated $36 million from the Rivers and Harbors

Contributed Fund required under existing legislation for work programmed in FY 1985. The FY 1986 budget request is adequate to meet all programmed requirements assuming that the projected $470 million in required non-Federal contributions are received in a timely manner. Included in this total is some $403 million that are to be derived from navigation interests with collection of such funds dependent upon enactment of the proposed legislation.

Under the Army's bill, the non-Federal share of costs for various existing and future activities would be increased and made available to us on a "pay-as-you-go" schedule. The net financial result is to reduce the level of funds the Congress has to appropriate. Based on the programmed requirements of non-Federal contributions, our FY 1986 request for Federal funds is $461 million less than that appropriated for FY 1985.

I will cover a number of the highlights of the budget at this time. Additional information on the FY 1986 Civil Works budget is provided in the Detailed Summary which also is being submitted for the record.

Construction, General

A total of $916 million is programmed for those activities funded under the Construction, General Account. The actual FY 1986 budget request for Construction, General is $842 million and is to be augmented by non-Federal contributions of $74 million, $15 million of which is pertinent to improvements of ports and inland waterways and, consequently, dependent on enactment of legislation. The budgeted amount is about five percent less than FY 1985 but will permit us to maintain schedules, insofar as funding is concerned, on all construction projects and major rehabilitation projects funded under this account. Funds also are included for 29 new construction starts, as well as four dam safety assurance projects involving increased spillway capacity and modifications based on seismic considerations. Funds are also included in a lump sum, to initiate construction on an as yet undetermined number of dam safety projects that may be ready to be undertaken in FY 1986. Funding of the new construction starts reflects the Department of the Army's cost sharing and financing proposals accepted by the projects' sponsors. Thirteen of the 29 new construction starts are projects previously budgeted in Fiscal Years 1983, 1984, and 1985. They were considered but not acted upon in the 97th and 98th Congresses.

Bills addressing the issue of cost-sharing were developed during the last Congress by the authorizing committees in both chambers and since have been reintroduced in this session. Both bills endorse the basic goal of increased non-Federal financial participation in project development and operation and maintenance. What remains at issue is the extent of non-Federal cost sharing and financing and, indirectly, the role of the Federal Government in the construction, and/or operation and maintenance of projects with certain outputs, most notably commercial navigation, recreation, hydropower, municipal and industrial water supply and hurricane protection. Since the potential for resolution of all issues appeared good, we continued this past year to negotiate for the joint development of additional projects with those sponsors who are voluntarily willing to increase their share of project costs. The investment required for all 29 budgeted new construction starts is now estimated at over $1.6 billion (October 1984 price levels), of which the non-Federal share would be almost $900 million, or about 57 percent of the total investment. In all cases, the agreements with the sponsors provide for the non-Federal share to be adjusted to reflect whatever cost-sharing provisions are agreed to by the President and the Congress.

The joint agreements with the four port authorities are cases in point. The port people have not been enthusiastic about the proposals for increased cost sharing, as evidenced by the earlier stand taken by the American Association of Port Authorities and the differences inherent in the array of Congressional bills introduced during the past three years. Nevertheless, the need for further navigation development seems to have overcome an understandable reluctance on the part of some ports to commit their financial resources at this time.

Also pertinent to our role in developing water resources is the three-party agreement for the Town Bluff, Texas project that Mr. Dawson discussed. Our program calls for the total non-Federal funding of this power project. Power sales and revenue disposition will be made in accordance with Section 5 of the 1944 Flood Control Act. The project financier and the preference customer (both selected independently in accordance with the provisions of the Administrative Procedure Act) is the Sam Rayburn Municipal Power Agency. The Southwestern Power Administration, as the marketing agency, will deliver the power and energy produced at the project to the sponsor for a term of 50 years in lieu of a financial return on its investment. That agency will recover all Federal expenses for the project's operation, maintenance, replacement, and marketing costs on an annual basis. These revenues will be deposited into the Treasury.

Continuing Authorities Program

We are requesting $43 million under the Construction, General account for the continuing authorities program. This is a significant request and reflects our confidence that the President and Congress will agree to appropriate cost sharing and financing arrangements.

The budget request is premised on implementation of the same type of cost-sharing proposals being applied to the regularly authorized projects. Study cost sharing on a 50-50 basis will be applied to the detailed project studies phase of the flood control, navigation, and beach erosion control authorities. The initial appraisal and reconnaissance phases will continue to be conducted at full Federal expense. Sharing of a project's capital costs generally is comparable to that being proposed for regularly authorized projects. Sharing of operation and maintenance costs is unchanged from previous arrangements, except for projects implemented under the navigation authorities—for these projects the local sponsor would be expected to assume responsibility for 70 percent of the operation and maintenance costs.

Operation and Maintenance

Over $1.3 billion is being programmed in FY 1986 for work normally funded under the Operation and Maintenance, General account. This is only $11 million, less than one percent, above last year's appropriation, an increase attributable to activities previously funded under other appropriation titles. The budget request of $961 million is to be augmented by user fee receipts to be collected and deposited in existing trust funds to help defray our costs for the operation and maintenance of our navigation projects: $160 million from the Inland Waterways Trust Fund and $195 million from the Rivers and Harbors Contributed Fund, another trust fund.

The program request basically provides sufficient funds for the continued operation and maintenance of our projects. Some $741 million is needed for the continued operation and maintenance of shallow-draft and deep-draft navigation projects, including channels, harbors, and lock and dams, both completed projects and new projects coming on line. The small increase of resources this year is attributable to both the full operation of the locks and dams on the Tennessee-Tombigbee River and the higher follow-on funding required for the major rehabilitation of three harbors, one lock and dam on the Illinois Waterway and one powerhouse initiated last year. The FY 1986 program includes $381 million for dredging, a reduction of $43 million from that scheduled for accomplishment in FY 1985. We again are proposing to add three projects to the four projects already funded for caretaker status because their commercial tonnage does not justify the continuation of regular operation and maintenance activities. Another $485 million of the amount would be used for essential operation and maintenance of our completed flood control and multiple-purpose power project facilities. The remaining $90 million is for protection of navigation as well as the continuance of our regulatory and mobilization planning programs.

With the increased awareness of the need to evaluate and repair older structures, we are budgeting some $67 million for the major rehabilitation or replacement of our projects. Included is $33.2 million under the Operation and Maintenance, General, account of which $5.7 million is for new starts on four lock and dam projects. As an adjunct to our major rehabilitation program, we are undertaking a major research program addressing the problems associated with the repair, evaluation, maintenance and rehabilitation of existing structures. The goal of this research program is to develop improved or new techniques, capabilities, and even materials to achieve savings and efficiencies that will greatly reduce our expenditures for the major rehabilitation of our projects. Budgeted in FY 1986 for the third year of this six year research program is almost $8.2 million .

As Mr. Dawson has indicated, the Presidential reductions applied to all domestic programs required us to defer some maintenance of lower priority for one year. These maintenance activities included some dredging at harbors with less than 25,000 tons of commercial traffic annually and some project maintenance that had been previously programmed for accomplishment in FY 1986.

Mobilization and Readiness Planning

The Corps' mobilization and readiness planning mission which is budgeted for $13.3 million encompasses emergency functions beyond the expected military support. Involved are activities that are responsive to needs resulting from national disasters — for example the national water resource allocation, and the emergency construction and engineering support provided FEMA and others, including the individual States and local authorities.

The Corps' program provides the necessary construction support ability, both stateside and overseas, to assist in the promotion of a credible national defense. However, the support capability that the Civil Works program provides the Nation is equally important. Key to both Corps missions is the availability of personnel capable of rapidly concentrating their efforts to support the military and civil sectors during a national emergency. Critical to this support is the effort directed by Executive Order 11490, as amended, to develop emergency relocation sites so as to maintain continuity of operations. These emergency relocation sites would provide protected facilities located outside a critical area to which essential personnel would be moved under emergency conditions. As directed by the Conference Report, HR 98-866, a detailed plan is being developed for submittal to Congress which defines the scope and the parameters for selection of the emergency relocation sites.

Flood Control, Mississippi River And Tributaries (MR&T)

For the MR&T program, the $269 million budget request together with $33 million in proposed user fee receipts from the Inland Waterways Trust Fund, represent a decrease of $19 million from the FY 1985 appropriations. The decrease essentially is attributable to a reduction in the funding requirements for the Old River Auxiliary Control Structure as construction of that feature nears completion. The overall funding request is sufficient for normal operation and maintenance of the MR&T project, and for continued survey and construction schedules consistent with prior year performance and historic funding experience. One new start is included in the MR&T budget request - the initiation of Continuation of Planning and Engineering on Nonconnah Creek in Tennessee and Mississippi.

General Investigations

Total funding for the overall General Investigations program in FY 1986 amounts to $127 million with $119 million in appropriations being requested. The $127 million is a decrease of $11 million from last year's appropriation. The budget continues to reflect our policy of emphasizing those studies most likely to result in early construction of traditional Corps projects. It is a reasonably balanced program in that funds are included for eight new starts as well as for continuing activities. In FY 1985, we are funding the feasibility phase of studies at full Federal expense once a conditional contract is executed; however, the FY 1986 budget request of $8.6 million for continuing 47 of these studies is the Federal share, or one-half the total requirement. I, therefore, fully endorse Secretary Dawson's statement that you allow us to implement this cost sharing. As of 31 January 1985, we have executed five Feasibility Study Cost Sharing Agreements with local sponsors and are proceeding with Federal funding of both the Federal and non-Federal shares of study costs to insure efficient study schedules pending implementation of study cost-sharing. This permits an orderly transition to the proposed Federal and non-Federal partnership arrangement in FY 1986. I should note here that the 50/50 feasibility phase cost-sharing arrangement on which the budget request is premised is compatible with study cost-sharing provisions of Senate Bill 1739 under consideration in the last session of Congress and since reintroduced in this session as Senate Bill 366.

Included under General Investigations is a request of $28.2 million to continue planning and engineering on 47 projects, including three new starts. The Advance Engineering and Design (AE&D) program continues to decline as design is completed on the remaining unconstructed authorized projects of interest to local sponsors. Work on 13 ongoing and one new start will be funded with the $5.4 million requested for the AE&D program.

Revolving Fund

Our FY 1986 Plant Replacement and Improvement program (PRIP) under the Revolving Fund is estimated at $81 million, and includes a request for new budget authority in the amount of $7 million. This consists of $2 million to initiate construction of a replacement dustpan dredge for work on the Mississippi River, and $5 million to initiate procurement for the Corps of

Engineers Automation Plan, which we call CEAP. Both of these items have been previously identified to the Committees and we expect to award contracts for procurement in the latter part of FY 1986.

Included in our program are second year costs of the new major items approved by the Committees in FY 1985, and the continuation costs for items initiated prior to FY 1985. Maintaining our emphasis on modernization and increased productivity of our plant equipment, we have included new starts for four major items in FY 1986. They include a riprap test facility at the Waterways Experiment Station, an addition to the Hydraulics Laboratory Building which is also at the Waterways Experiment Station, a replacement towboat for use on the Upper Mississippi River by the Rock Island District, and a replacement derrickboat for use on the Ohio and Kanawha River navigation projects by the Huntington District.

General Expenses

The FY 1986 budget request for General Expenses is $107 million, a decrease of $5 million from the FY 1985 appropriations. The FY 1986 request reflects a freeze at the FY 1985 appropriation level and a further reduction of $5 million imposed as part of the President's initiative for a 10 percent reduction in administrative expenses. This appropriation, which is essentially for the executive direction and management of the Civil Works program, includes requirements for Headquarters, Division Offices, and four Support Centers. This cut in funding will be absorbed but with some real difficulties.

PROGRAM FUNDING

OVERVIEW

As I mentioned earlier, what really differs from past budget submission is how our workload is to be funded. Under the proposed authorization bill, the non-Federal share of costs for various ongoing and future activities would be increased and made available to us on a "pay-as-you-go" schedule. The projected increases in non-Federal contributions reflect the basic objective of having the beneficiaries pay a more equitable share of our costs, including financing, incurred in the study, construction, and operation and maintenance of our projects. The non-Federal share of the study and construction costs generally is to be paid on a pay-as-you-go basis. Financial relief in the repayment for all or part of the local share of costs for non-vendible or partially vendible outputs would be granted if the cost of borrowing by the local interests proved greater than that incurred by the Federal Government. In practically all cases the tax-exempt status of non-Federal bonds makes it more financially advantageous for the sponsor to borrow and pay its share of costs upfront; the Federal Government also benefits by having to appropriate and borrow less monies. In the case of the 29 new construction starts recommended for initiation in FY 1986, only one sponsor found it necessary to seek Federal financial assistance.

COLLECTIONS

Studies and Construction

The non-Federal share of our costs would come from collections deposited into two existing trust funds. The collections would be made up of contributions both voluntary and required by law, and receipts from proposed user fees. The non-Federal contributions required for those programmed studies and construction projects affected by the new policies total $82 million. Of this contribution, $8 million represents the local share of 47 feasibility studies and $74 million is for projects under construction or recommended for new construction starts.

Operation and Maintenance and MR&T Construction

In addition, the proposed authorization bill provides for the collection of funds from the indivdual sponsors to help pay for part of our operation, maintenance, and rehabilitation costs of those channels and harbors that exceed 14 feet in depth; Federal funds would be used only when the costs at any one port exceed 125 percent of the national average for such work, based on a unit-cost per ton of commerce at all ports. The bill also calls for user fees to cover 70 percent of our operation, maintenance, and rehabilitation costs for channels and harbors with depths at mean low tide of 14 feet or less, including the Inland Waterways system and those deep port harbors with commercial traffic of less than a million tons a year. In all, some $388 million in receipts are projected to be collected and made available for obligation in FY 1986, with $355 million allocated for expenditure on work heretofore funded under the Operation and Maintenance, General appropriation title and the balance of $33 million allotted for use on the Mississippi River and Tributaries project for both operation and construction activities.

Use of Trust Fund

All the non-Federal contributions are to be deposited into two existing trust funds and will be withdrawn by the Corps on an as-needed basis. The first trust is the existing Rivers and Harbors Contributed Funds trust into which all the required contributions for programmed studies, construction, and operation and maintenance of projects other than those on the Inland Waterways would be deposited. User fees for the recovery of costs incurred on the Inland Waterways for the planning, engineering, construction, operations, and maintenance would be deposited in the existing Inland Waterways Trust Fund. These user fees are over and above the funds being collected pursuant to the fuel tax enacted by Public Law 95-502.

Implications of Cost-Sharing Proposals

The requirement for increased cost sharing by local interests will bring about some significant changes in our program -- both in its direction and outputs. There is a strongly held view or perception, that earlier cost sharing does help test projects before they go too far to be stopped, perhaps more painfully later. The two-phase study process now in place, including the cost-sharing of the feasibility-phase study, should help assure that our planning and engineering efforts are being concentrated on those projects that the sponsor will want to carry through to the construction stage. Just as important is the fact that the reality of the projects' outputs as reflected by the willingness to cost share should assure that we are working on the priority problems within each region of the country. Financing capabilities also will encourage implementation of the plan which produces the greatest amount of benefits at a cost that is affordable, in other words, the most cost-effective plan. Such a change should result in a future emphasis on smaller or simpler projects that are more carefully tailored to the basic needs and financial capabilities of the sponsor and, where feasible, to the construction phasing of a project's separable elements.

OTHER PROGRAM HIGHLIGHTS

Regulatory Program

We are making significant gains in our regulatory reform efforts, particularly with regard to reducing delays and uncertainty for the public. In 1982, we signed new memoranda of agreement with the Federal resource agencies which review our permit applications. The agreements provided expedited coordination procedures which, along with other program revisions, have helped reduce our application review time by some forty percent to an average of about 75 days per permit. In addition, changes in provisions by which these agencies may request elevation of applications to Washington for decision, have resulted in significantly fewer such referrals. Overall, we now are handling about 13,500 new applications a year, a 20 percent reduction from FY 1982, attributable to the use of regional and nationwide permits which eliminate the need for individual applications.

We are also making progress in our relationships with the states in the regulatory program. Our regulations have been rewritten to give state views greater weight in our decision making process. We are also working with the state agencies to speed up their procedures to provide water quality certification for our permits. Finally, we have realigned our regulatory boundaries so that in the last four years, we have gone from 13 to 33 states that need deal with only one Corps district on permit matters.

Review of Completed Projects

Many Corps projects now in operation can be easily modified, physically or operationally, to help meet some of the Nation's unmet water needs. Section 216 of the 1970 Flood Control Act provides authority to review existing projects to ensure their most efficient use. Faced with the potential for increased use of this authority in the years ahead, the two phase study process will be applied to all new Section 216 studies starting in FY 1985. The reconnaissance-phase study will be conducted at full Federal expense; the feasibility-phase study will be equally cost shared with a non-Federal sponsor when it appears that modification and retention of the Federal project is warranted. Where Federal retention is not contemplated, such as transfer to a non-Federal entity or deauthorization and abandonment of a project, the feasibility-phase study will be at full Federal expense.

Moreover, if the project is part of the Inland Waterway system, the study will be undertaken at full Federal expense.

Workyears

The Corps workyears ceiling for FY 1985 is essentially the same as that for FY 1984. However, it reflects a FY 1985 decrement of 251 workyears offsetting Public Law 98-473 which, by reference to Section 129 of H.R. 5899, exempted the workyears required for operation of the Washington Aqueduct from the Corps ceiling. The Corps workyears ceiling for its FY 1986 Civil Works program is 28,395 workyears of Full Time Equivalents (FTE). This is a reduction of 250 FTEs from our FY 1985 ceiling of 28,645. This reduction will be accomplished, for the most part, by contracting out additional work and by management efficiencies. While we have been basically able to accomplish our Civil Works program within our reduced workyears ceilings, projections of future workloads indicate a real potential for deficiencies in certain functional areas. Enactment of a Water Resources Development Act and restoration of our construction program could cause significant increases in the planning, engineering, and construction management functions. The potential shortfall in workyears will be alleviated by identifying areas where the current workload can be carried out more efficiently.

Productivity Improvements

While there are several different kinds of productivity-oriented initiatives the Corps of Engineers uses to examine maximum low-cost delivery of high-quality services, there are two of particular emphasis for FY 1986 and the following years.

The first initiative focuses on commercial-type activities to determine the best procedure for getting the job done, and to see if private industry can deliver the same services at a lower cost. We expect to identify approximately 1,000 positions across the Nation for such studies during FY 1985, although not all such studies will be completed in this timeframe. In FY 1986, the Corps plans to study about 1,500 more positions with another 3,000 scheduled for study in Fiscal Years 1987 and 1988. Past experience indicates that even when the activity continues to be performed by the Corps workforce rather than by contract, some savings accrue to the agency. However, one factor which may be difficult to assess is the impact on the morale of those whose positions are being studied. Manpower savings resulting from either the restructuring of internal operations or the conversion to contract operations where cost effective, can be reallocated and used to offset the workyears shortfall that could be experienced once the cost-sharing impasse over future workload is resolved and the work is funded for implementation.

The second initiative involves the efficiency review of non-commercial activities. If it is determined that a function is not a commercial activity, the Corps still critically examines that function for productivity improvements. We will be looking at 1,250 positions in this manner in FY 1985, approximately 2,200 in FY 1986, and another 4,325 in the two-year period, FY 1987-1988. These studies will cover much of the Corps engineering, construction management, and real estate workforce, and are expected to yield savings in processing time, manpower, and our total cost of doing business.

DREDGING FLEET

CORPS FLEET

In general, industry has responded well to the national dredging requirements, including the Great Lakes area, where many of the jobs previously performed by hopper dredges are being accomplished with non-hopper equipment. Accordingly, early in FY 1984 we were able to reach the minimum fleet level of four hopper dredges. We are currently operating eight non-hopper dredges, including one cutterhead, three sidecasters and one special-purpose dredge. We will continue to operate the sidecaster dredge SCHWEIZER and the special purpose dredge CURRITUCK until the industry develops an equivalent capability. These two vessels are used to maintain the shallow draft inlets, channels, and harbors along the Atlantic Coast. When the industry has plant capable of responding to these needs, we will re-evaluate the requirement to operate the SCHWEIZER and the CURRITUCK and, if feasible, reduce our fleet to six non-hopper dredges.

RESERVE FLEET PROGRAM

Concurrent with the reduction in the Corps fleet we have supplemented our emergency and defense dredging capabilities of our minimum dredge fleet by establishing a reserve fleet of industry dredges under the Corps of Engineers Reserve Fleet (CERF) program. We will continue to deploy immediately the

Corps minimum fleet vessels to meet emergency and defense dredging requirements as they occur. When this capability is not adequate to meet the dredging requirements, we will deploy industry reserve fleet dredges as they are needed. The CERF is analogous to the Civil Reserve Air Fleet of the Air Force and the Sealift Augmentation program of the Navy, with the exception that we will not compensate the industry firms unless their dredges are activated under the CERF.

In October 1984, during the Powder River mobilization exercise, we tested our reserve fleet program by activating an industry dredge to perform some emergency dredging in the entrance channel to Mobile Harbor. The activation worked as planned, with the industry dredge mobilizing within the required 72 hours and performing the work expeditiously and efficiently. This exercise was conducted under "real world" conditions, and we were quite pleased with the results. The first phase of our CERF program is limited to the use of industry hopper dredges in the geographical areas of the United States and its possessions. During this past year, all of the twelve industry hopper dredges in the United States have been enrolled as participants in our reserve fleet program. The next phase will include preparation of contract documents for use of the industry reserve fleet in overseas areas. We expect to complete this phase during this fiscal year and include the use of industry non-hopper dredges in the reserve fleet program during FY 1986.

DISPOSAL OF DREDGED MATERIAL

PERSPECTIVE

The disposal of dredged material continues to be the number one problem in the management of our national dredging program. For example, in many of our coastal areas and some of the inland areas we are approaching a crisis situation in locating required new upland sites which are both environmentally acceptable and within a reasonable haul or pumping distance from maintenance dredging activities. Such problems are frequently exacerbated by the often-conflicting environmental goals of the over 30 major Federal environmental statutes which govern the manner in which dredged material is disposed.

Much of the environmental concern over dredged material stems from the fact that in certain limited cases there were contaminants associated with dredged sediments. However, extensive scientific research, including the Corps' 5-year $33 million Dredged Material Research Program, clearly indicates that over 90 percent of the sediments we dredge each year for navigation projects pose no significant threat to the environment. In spite of this fact, there continues to be a public perception that all dredged material is contaminated. Recent experience at the Tampa, Florida, harbor serves to emphasize this point. Although state-of-the-art scientific testing procedures clearly demonstrated the continued environmental acceptability of maintenance dredged material for disposal, the close-in, open water site used in prior years was closed due to public concerns over sediment toxicity and moved farther offshore at greater expense to the taxpayer. However, surveys completed about a year after use was terminated at the original site clearly show that this disposal site now harbors a highly-productive and diverse biological assemblage. Ten percent of all dredged material may contain contaminants which have a potential for unacceptable adverse effects. For that material, the Corps has developed careful disposal management techniques which preclude the potential contaminants from entering the ecosystem. Unfortunately, the environmental statutes and their implementing regulations and criteria have not, for the most part, been revised to reflect the scientific data and knowledge which we have acquired during the past 10-12 years.

DISPOSAL SITES

There has been a major breakthrough as a result of the issues surrounding the Tampa Harbor ocean disposal site; the resource and local environmental groups now have agreed that future decisions regarding use of a disposal site will be based on hard data concerning degradation. Consequently, the EPA and the Corps are closely monitoring the disposal of dredged material and the effects of disposal both within and outside the designated disposal area. Results to date do not indicate any evidence of adverse impacts, and we are hopeful that subsequent disposal site decisions there and in other coastal regions around the country will be based on solid scientific evidence rather than subjective or emotional conclusions. The savings or cost avoidance associated with the continuing use of inshore coastal disposal areas rather than being forced to go to remote and costly offshore disposal sites amounts to several hundred millions of dollars and is particularly meaningful in this era of reduced Federal expenditures and the need to have the beneficiaries bear a part of the cost of port improvements and subsequent maintenance.

RESEARCH EFFORTS AND FOLLOW-ON

Operational and Technical Activities

The Corps is continuing to assign high priority to research and development on all environmental facets of our dredged material disposal activities including beneficial uses, intensive management procedures such as dewatering for maximizing the life expectancy of existing disposal sites, and scientifically appropriate testing, evaluation, and disposal management procedures for handling highly-contaminated dredged sediments, such as at proposed Superfund sites. In addition, we have developed a comprehensive and scientifically based dredged material assessment and disposal management protocol which will be useful for future studies relating to dredge and fill issues.

Field Verification Program

A cooperative field verification program between the Corps' New England Division, our Waterways Experiment Station and the EPA has been established to evaluate three different disposal alternatives. The Corps' Black Rock Harbor project at Bridgeport, Connecticut was selected because dredged material from a single maintenance dredging operation could be used to evaluate, independently and at the same time, the three basic alternatives of open water disposal, upland disposal and wetland creation. This field study will provide the first opportunity for direct comparison of the environmental consequences using the same dredged material under different disposal conditions. Test results from the field studies will be compared to laboratory predictions to verify the accuracy of predictive methods that both agencies feel should be used in evaluating disposal alternatives.

The EPA will be responsible for the determination of predictive methods for the following enviromental parameters: bioaccumulation of contaminants by aquatic animals; the consequences of bioaccumulation in aquatic animals; and the effect of aquatic disposal on the aquatic community structures. At the same time, our Waterways Experiment Station will be responsible for the monitoring and correlation of predictive methods for evaluating the effects of upland disposal on water quality and the bioaccumulation of contaminants in upland and wetland plants and animals. This field verification program initiated in CY 1982 is scheduled to be completed in CY 1987. For your information, interim results are very promising and should shed new light on the assessment techniques and comparative risk assessments of land disposal as opposed to estuarine or aquatic disposal of contaminated dredged material. At this time, disposal on land and in the wetland environment appears to be more detrimental with regard to bioaccumulation of toxic substances than does the aquatic or open water disposal alternatives.

OTHER LEGISLATIVE ITEMS OF INTEREST

In addition to the cost-sharing legislative initiatives mentioned earlier we are preparing several other legislative items for consideration by the 99th Congress. I will discuss a few of these briefly.

RECREATION USER FEES

We are proposing to eliminate the prohibition on the authority of the Corps of Engineers to impose fees to help offset the cost of operating and maintaining project recreation lands and facilities. The current fee program is limited to the collection of fees for specialized recreation services, primarily overnight camping. Current collections amount to about 10 percent of costs. The proposed legislation would allow an increase in the cost recovery to a more equitable level — about 25 percent.

The Department of the Army, unlike other land managing agencies, is severely limited in the charges it may impose for admission to or use of recreation areas or facilities. With the expanded authority for collecting fees, we should be able to realize some $33 million for FY 1986. This represents an additional net increase in receipts of about $22 million over that estimated for collection in FY 1985. These amounts would, in turn, be available for appropriation to fund the outdoor recreation program of the Corps of Engineers, reducing the burden on the General Fund of the Treasury. Receipts from collected fees would be credited to the already established special recreation user fees account and remain available until expended.

HYDROPOWER

There are 243 Corps of Engineers dams without power plants at which additional power could be developed. Most hydropower projects can be planned, constructed, and operated by non-Federal interests under the FERC procedures. However, the Corps should be directly involved in planning, design, and construction of hydroelectric facilities at its dams whether the power is developed by the Corps or non-Federal interests. Such involvement would assure that hydropower development is compatible with authorized purposes of the Federal project and that the structural integrity of the project is maintained. The Corps' 68 power projects account for almost one-fourth of the Nation's and one-half of the Federal installed hydropower capacity, and generate approximately three percent of the Nation's total electrical power. These projects account for nearly one-third of Federal power of all kinds — hydropower, fossil fuel, and nuclear. We have two legislative proposals to address development of hydropower facilities at Corps projects.

In those cases where non-Federal development of a hydropower potential at an existing Corps project may be impractical because of physical, legal, competing use, institutional, environmental or economic reasons, our first proposal would allow Federal development of hydropower with non-Federal interests financing the cost. In those cases where non-Federal development of hydropower at a Corps project is practical, our second proposal would provide for an arrangement which would be a good example of private-Federal partnerships to serve the best interest of the taxpayers by combining Federal expertise with non-Federal financing to accomplish sound hydropower development. In addition, where appropriate, joint construction of the power facility and the Corps project would be more efficiunt and cost effective, especially with regard to the power-on-line date.

DISPOSAL OF HOPPER DREDGES

Another of our proposals would permit us to dispose of fourteen obsolete Corps hopper dredges. These dredges, which have an average age of thirty-seven years, were retired as the industry constructed modern hopper dredges in accordance with the provisions of Public Law 95-269. The annual cost of retaining these surplus vessels in the Maritime Administration "dead fleet" is significant, about $500,000, even though minimal maintenance and surveillance is being provided. Under the proposed legislation these dredges may only be scrapped or sold to foreign buyers.

INCREASE PROJECT COST LIMITS

And finally, we propose to increase the single project limits on several of our continuing authorities programs, such as those for small flood control and navigation projects. Existing legislation limits the costs of projects to be implemented under these continuing authorities programs and these limits are now too restrictive compared to their levels when last set by legislation. The increase we propose is justified by normal cost increases since Congress last authorized increased cost limitations.

FEDERAL CAPITAL INVESTMENT PROGRAM INFORMATION ACT

Public Law 98-501, passed during the last session of Congress, establishes a National Council on Public Works Improvement which is to assess the state of the Nation's infrastructure in three annual reports in 1986, 1987, and 1988. The Act also provides for a twelve member inter-governmental Advisory Group chaired by the Secretary of the Army. Administrative support is to be provided to the Council by the U. S. Army Corps of Engineers and we are now identifying space and other administrative support requirements pending appointment of the council members. The Corps of Engineers has been directed through the office of the Assistant Secretary of the Army to form an Ad Hoc Planning team to examine administrative support requirements and options and to gather preliminary data to facilitate the work of the Advisory Group. The Secretary of the Army has initiated action that will facilitate the convening of the advisory group. The objective of this action is to assist the Council, when formed, in preparing the three annual reports on the state of the Nation's infrastructure as required by the law. We feel this initiative is necessary so that this very important effort be completed well and on time. The Corps, as directed, also has allotted up to $3.2 million for the use of the Council, starting in FY 1985.

A separate part of the Act requires an annual report on budget projections and a needs assessment to accompany the President's Budget. The Office of Management and Budget forwarded this report on February 11, 1985 to Congress.

CORPS OF ENGINEERS - CIVIL WORKS PROGRAM

SUMMARY OF PROGRAM AMOUNTS FOR FISCAL YEARS 1984, 1985, AND 1986
($Million)

Account Title	FY 1984 3/ (Appropriations)	FY 1985 5/ (Appropriations)	FY 1986 Program Budget Request	FY 1986 Program Non-Fed. Contr. 6/	FY 1986 Program Total Funds
GENERAL APPROPRIATIONS					
General Investigations	135.810	138.0	119.0	8.0	127.0
Construction, General 1/	926.804	890.0	842.0	74.0	916.0
Operation & Maintenance, General	1,190.492	1,305.0	961.0	335.0	1,316.0
(Special Recreation Use Fees 2/)	(6.000)	(15.0)	(12.0)		(12.0)
Flood Control, Mississippi River & Tributaries	302.480	321.0	269.0	33.0	302.0
General Expenses	105.800	112.0	107.0	-	107.0
Flood Control & Coastal Emergencies	10.000	25.0	25.0	-	25.0
Revolving Fund	9.500	-	7.0	-	7.0
PERMANENT APPROPRIATIONS					
Special Activities	9.779	8.0	8.0	-	8.0
Subtotal, Federal Budget Authority	2,690.665	2,799.0	2,338.0	-	-
Contributed Funds (required)	39.174 4/	36.0 4/	-	470.0	470.0
TOTAL, ALL FUNDS	2,929.839	2,835.0	2,338.0	470.0	2,808.0

1/ Excludes $180M deferred in FY 1983 for use in FY 1984-1985.
2/ Included in Operation and Maintenance, General.
3/ Reflects transfer of funds from Construction, General ($4.8M) to General Investigations ($2.0M) and General Expenses ($2.8M). Includes Supplemental Appropriations.
4/ Required financing from existing Trust, the Rivers and Harbors Contributed Fund.
5/ Excludes effects of proposed Section 2901 (PL 98-369) rescissions and transfers for pay raises.
6/ Includes projected contributions from the Inland Waterways Trust Fund and an expanded Rivers and Harbors Contributed Fund as provided for in the President's proposed authorization bill.

DETAILED SUMMARY OF CIVIL WORKS PROGRAM

FISCAL YEAR 1986 BUDGET

TOTAL FISCAL YEAR 1986 CIVIL WORKS BUDGET

The net FY 1986 budget request for the Civil Works Program totals $2.299 billion. This takes into account offsetting receipts estimated at $39 million, of which $21 million is dependent upon legislation to expand the Corps' authority to impose fees for the use of project recreation facilities. The gross appropriation request request is, therefore, $2.338 billion. Cash contributions for the non-Federal share of the FY 1986 programmed work are expected to amount to $470 million, which together with the $2.338 billion gross appropriation request, gives a total program funding of $2.808 billion.

ACTIVITIES UNDER THE GENERAL INVESTIGATIONS APPROPRIATION

Overall Request

The General Investigations budget request for FY 1986 is $119,000,000, a decrease of $19,000,000 from the FY 1985 appropriation of $138,000,000.

Surveys and Planning

Navigation, Flood Damage Prevention, Shoreline Protection, Comprehensive, and Special Studies. The budget request for these studies is $45,560,000, a decrease of $6,479,000 from the FY 1985 allocation of $52,039,000. This request would fund 148 studies, including 22 study completions. The budget request for surveys includes $2,810,000 as the Federal share of the first year's work on 14 feasibility phase studies and $5,766,000 to continue 31 feasibility studies that are funded in FY 1985 at full Federal expense. These feasibility phase studies are follow-ons to some of the reconnaissance phase studies that were funded in FY 1984 and FY 1985.

Review of Authorized Projects. The FY 1986 budget request is $600,000, a decrease of $7,665,000 from the FY 1985 allocation. Included in the total is $200,000 to continue the restudy of the deferred Winfield, Kansas project, $200,000 to continue the review of the completed Gathright Reservoir, Virginia and Hugo Lake, Oklahoma projects, and $200,000 to complete the review of 35 projects for possible deauthorization. The decrease is primarily due to shifting the study of a permanent solution to the problems caused by Mount St. Helens on the Cowlitz River and its tributaries in Washington to the Continuation of Planning and Engineering category.

Coordination Studies with Other Agencies. Our budget request of $5,600,000 is a decrease of $150,000 from the FY 1985 allocation. Included in this category is $2,500,000 for the programs of Special Investigations and FERC Licensing. Another major part of this request, $2,600,000, is for Planning Assistance to States, with which we will provide assistance to all 50 States, the Pacific Islands, and Puerto Rico. Our assistance will allow the States to become more effective partners in resolving water problems.

Legislative Phase I Stage of Advance Engineering and Design. Legislative Phase I projects are not authorized for construction, and require additional formulation studies of potential projects. As a part of the Phase I study process, alternative solutions recommended by the survey report plan are carefully reevaluated, and changes may be recommended. The FY 1986 budget request includes $3,021,000 to complete one study and continue work on three others. This is a decrease of $1,705,000 from the FY 1985 allocation of $4,726,000.

Advance Engineering and Design. The FY 1986 budget request for Advance Engineering and Design (AE&D) is $5,404,000, a decrease of $5,078,000 from the FY 1985 allocation of $10,482,000. This request would initiate one project and continue 13 others, of which two will be completed.

Continuation of Planning and Engineering Studies. The FY 1986 budget request for Continuation of Planning and Engineering Studies is $28,235,000, a decrease of $11,993,000 from the FY 1985 allocation of $40,228,000. This request would fund 47 studies, including eighteen for completion and three new starts.

Collection and Study of Basic Data

The FY 1986 budget request of $12,080,000 is $1,825,000 greater than the $10,255,000 allocation for FY 1985. The activities which have the largest dollar amounts in this category are Flood Plain Management Services, $8,300,000, and Coastal Field Data Collection, $1,800,000. Other activities, which total $1,980,000, include Precipitation, Hydrologic, Transportation, Environmental Data, and International Waters Studies; Stream Gaging; and Scientific and Technical Information Centers.

Research and Development

The budget request for Research and Development under the General Investigations appropriation is $21,500,000, which is an increase of $1,500,000 over the FY 1985 allocation of $20,000,000. The FY 1986 request will permit progress in all research areas. Funds totaling $14,075,000, an increase of $1,030,000 over the FY 1985 allocation of $13,045,000, are included under other appropriations for Research and Development work closely related to other activities.

ACTIVITIES UNDER THE CONSTRUCTION, GENERAL APPROPRIATION

Overall Request

The FY 1986 budget request for Construction, General is $842,000,000, a decrease of $48,000,000 from the FY 1985 appropriation of $890,000,000. The request contains $51,240,000 for 33 new start construction and dam safety assurance projects. Seven of these projects were included among those to be started under the FY 1983 budget amendment of 25 May 1982, four projects were included among those to be started under the FY 1984 budget, and two projects were included among those to be started under the FY 1985 budget. However, construction funds have not yet been appropriated for any of these previously budgeted projects. Sixteen new start construction projects and four dam safety assurance projects are included in the FY 1986 budget. Funding of the new construction starts reflect the cost-sharing and financing proposals worked out between the local sponsors and the Department of the Army.

Continuing Construction Projects

The FY 1986 budget request includes $690,723,000 to maintain schedules, insofar as possible, for 95 continuing construction projects, and one reimbursement project. This is a decrease of $79,748,000 from the FY 1985 allocation of $770,471,000. The request will permit the completion of 11 projects.

Major Rehabilitation

The Major Rehabilitation program covers significant one-time structural repairs on completed projects that cost in excess of $5,000,000 for an individual project. The FY 1986 budget request includes $33,837,000, a decrease of $19,193,000 from the FY 1985 allocation of $53,030,000, for seven continuing projects in this program. Two of the continuing projects will be completed with the funds requested. This remedial work will restore structures to an adequate operating condition, substantially increase their physical life, and permit continued effective realization of their benefits. Effective in FY 1985, new start major rehabilitation projects are budgeted under the Operation and Maintenance, General appropriation.

Dam Safety Assurance

The Dam Safety Assurance program provides for modification of completed Corps dam projects which are potential safety hazards in light of present-day engineering standards and knowledge. The FY 1986 budget request includes $10,500,000, an increase of $9,600,000 from the FY 1985 allocation of $900,000. Four specific projects are recommended as Dam Safety Assurance new starts and a total of $6,500,000 is included for them in the budget request for each applicable division. Also, $4,000,000 is included in the Remaining Items budget request for Dam Safety Assurance new starts which may be approved in FY 1986 as the result of studies now underway. The program will facilitate upgrading of those project features which, due to updated or changed climatic or hydrologic conditions or projections, no longer function as originally intended.

Special Continuing Authorities

The FY 1986 budget request for five of the six Continuing Authorities that make up the Small Projects Program funded under Construction, General is $43,000,000, a decrease of $3,287,000 from FY 1985 allocation of $46,287,000. There is no budget request for projects under Section 111 of Public Law 90-483, mitigation for shore damage attributable to navigation projects. Funding for construction new starts accounts for about one-third of the budget request and is mostly for responding to flood control and emergency streambank problems. The request will permit initiation and continuation of planning and construction in these programs that address relatively small navigation, flood damage prevention, beach erosion control, emergency streambank and shoreline protection, and snagging and clearing problems. The budget request is premised on implementation of the same type of cost sharing proposals being applied to regularly authorized projects.

Aquatic Plant Control

The FY 1986 budget request includes $8,000,000 for Aquatic Plant Control, which is a decrease of $551,000 from the FY 1985 allocation of $8,551,000. Noxious aquatic plants presently infest about 1 1/2 million acres of streams and lakes, and have the potential to infest about 53 million acres nationwide. The budget request for the Aquatic Plant Control program includes $1,650,000 for research and development and $467,000 for planning, which are 100 percent Federally funded; and $5,883,000 for control operations, which are cost-shared 70 percent Federal and 30 percent non-Federal. The major objective is to establish effective Federal-State action to control noxious aquatic plant infestations which have significant economic or environmental impact on use of the Nation's waterways.

Employees' Compensation

The FY 1986 budget request includes $11,200,000 for costs previously paid by the Department of Labor from the Employees' Compensation Fund during the period 1 July 1983 through 30 June 1984 as the result of injury or death of employees under the jurisdiction of the Corps of Engineers civil functions. This is an increase of $814,000 over the FY 1985 allocation of $10,386,000.

ACTIVITIES UNDER THE OPERATION AND MAINTENANCE, GENERAL APPROPRIATION

Overall Request

The Operation and Maintenance, General (O&M) recommended program for FY 1986 is $961 million, a decrease of $344 million from the FY 1985 appropriation of $1.305 billion. The budget request reflects a financing proposal to derive an additional $355 million in local funds comprised of fees under proposed legislation to be deposited in and appropriated from the Inland Waterways Trust Fund in the amount of $160 million and from the Rivers and Harbors Trust Fund in the amount of $195 million, for a total O&M program proposal of $1.316 billion. The Corps operates and maintains completed projects to insure that the significant public benefits of navigation, hydropower, flood control, water quality and supply, and recreation are provided, consistent with authorized project purposes and current project demands. In FY 1986, the Corps will operate and maintain 271 navigation projects, 260 flood control reservoir projects, 20 local protection projects, and 72 multiple-purpose projects with power.

Program Highlights

The FY 1986 program request of $278,000,000 for operation and maintenance of multiple-purpose power projects is an increase of $6,000,000 over the FY 1985 allocation. The FY 1986 program request of $741,000,000 provides sufficient funds for the operation and maintenance of navigation features of inland, deep-draft and shallow-draft projects. However, the competition for limited funds requires the deferral of some maintenance on lower-priority projects.

Hydropower

As of 31 December 1984, the Corps was operating 68 projects producing hydropower. These projects have 340 generating units with an aggregate nameplate capacity of 19,606,777 kilowatts, which accounts for approximately one-fourth of the Nation's installed hydroelectric capacity. These projects also provide navigation, flood control, water quality and supply, and recreation benefits, consistent with authorized project purposes and current project demands. Last year, Corps hydropower energy production amounted to about 88 billion kilowatt-hours. The Corps' present hydropower capability constitutes approximately three percent of the Nation's electrical power generating capacity.

Major Rehabilitation

Major Rehabilitation work which had been funded prior to FY 1985 is included in the Construction, General request. Major Rehabilitation projects initiated in FY 1985 were included in the Operation and Maintenance, General budget request. The FY 1986 proposed program includes $27,900,000 to continue remedial work on one lock and dam project, three harbor projects, and one multiple-purpose power project, and $5,300,000 to initiate work on four lock and dam projects.

Recreation Management

Nearly 485 million recreation days were recorded at Corps projects during Calendar Year 1984, consistent with the role of Corps projects as a major source of recreation opportunities to the public. The FY 1986 program includes $138,985,000 for operation and maintenance of approximately 2,200 recreation areas. $5,900,000 is included for increased law enforcement protection in Corps-operated areas during periods of peak visitation. The FY 1986 amount also includes $12,000,000 of Special Recreation Use Fees monies returned to the Corps for operation and maintenance of recreation areas, and $3,601,000 for development of Recreation Facilities at Completed Projects, which is a decrease of $6,399,000 from the FY 1985 allocation. Of the latter amount, $3,054,000 is for construction of facilities on a 50-50 cost-sharing basis with local interests who also agree to operate and maintain the developed recreational areas. The remaining $3,054,000 is to fund new construction starts in the continuing program for correction of sanitary deficiencies presently in violation of State and Federal standards at completed projects.

Natural Resources Management

The FY 1986 request includes $35,030,000 for Natural Resources Management at over 450 lakes and navigation pools comprising over 11 million acres, about half of which is water surface, with about 50,000 miles of shoreline. This is an increase of $2,850,000 (8%) over the FY 1985 allocation. Intensive public use requires careful management to maintain the natural resources base essential to meet all authorized project purposes. The FY 1986 request will meet mitigation requirements and basic protection of the resources base. This basic protection includes: preservation and maintenance of vegetation, soil, water, fish, wildlife, and other elements essential to the total ecological management of each project. Outlease and permit programs are integrated with specific project fish and wildlife studies and management of fish hatcheries, ladders, elevators, locks, and related facilities for passage of anadromous fish.

Regulatory Functions

The FY 1986 budget request includes $51,000,000 for the regulatory program, which is a $1,500,000 increase over the FY 1985 allocation. Regulatory activities are conducted primarily under the authorities of three Acts: Sections 9 and 10 of the River and Harbor Act of 1899; Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972; and Section 404 of the Clean Water Act. The number of applications received for individual permits has declined slightly to 13,500 in FY 1984, after substantial increases in the mid-70's. In FY 1977 we reached a high of 21,000 applications. Since that time, our use of regional and nationwide permits has kept this number down by exempting the public from making formal application to the Corps in many situations. Tens of thousands of minor activities are now authorized each year by regional and nationwide permits. As a result of a directive from the President's Task Force on Regulatory Relief, we are implementing significant program reforms which are expediting processing of applications and reducing the regulatory burden on the public. We are now completing review of applications in an average of 70 days compared to 120 days at the end of FY 1982. Most remaining reforms will be implemented by regulation by the end of 1985.

Mobilization Planning

The Corps FY 1986 Mobilization Planning program was developed to continue the implementation of a comprehensive five-year effort to develop and maintain a capability to respond decisively and effectively to any national emergency. The FY 1986 budget request of $13,300,000, an increase of $3,400,000 from the previous year, reflects expanded prepardness planning efforts particularily with respect to the emergency water planning mission and expanded emergency exercise participation, and provides start-up funds for new initiatives. Briefly, the funds will be used to continue to develop national emergency preparedness plans, to train personnel to meet the responsibilities of a national emergency, and to supply and maintain emergency facilities. Some scheduled activities include: the expansion of the Emergency Water Planning Program through the involvement of additional

Corps Districts; the upgrading and converting of existing facilities to emergency relocation sites to increase the survivability of the Corps command and control structure; the upgrading of existing substandard emergency operations centers; and the expansion of the Corps macro-mobilization study program to analyze, on a regional basis, the Corps requirements and capabilities during a mobilization.

Environmental and Water Quality Operational Studies

The growing national concern for the environment during the 1970s resulted in an increased need for new technology to address environmental problems associated with the Civil Works mission of the Corps of Engineers. This lack of technology often resulted in project delays, operational problems, and difficulty in meeting authorized project purposes in harmony with environmental goals. Thus, in 1976 a survey of Corps field offices was conducted to identify the highest-priority environmental problems associated with reservoir and waterway projects. As a result of this survey, the Environmental and Water Quality Operational Studies Program (EWQOS) was initiated in FY 1978 to develop new technology. THe EWQOS program will be concluded in FY 1985 and will represent a major milestone in the Corps effort to meet established national environmental goals. The technology developed through EWQOS is being used by Corps field offices to solve environmental problems in an effective manner. During the latter years of the program, a concentrated effort on technology transfer has assured that the products of EWQOS are available to field offices in a manner that insures their effective use. As a result of EWQOS, the Corps will be able to rapidly and efficiently respond to newly emerging environmental problems and program benefits will be realized far into the future.

River Ice Management (RIM) Research Program

As part of the Corps responsibility for the operation and maintenance of the Nation's waterways, it attempts to provide reliable avenues for waterborne commerce. Across the northern United States, ice presents a major physical impediment to winter navigation on domestic waterways, particularly in those areas accustomed to year-round navigation. The challenge is to develop ice control techniques which will permit cost-effective, reliable, and safe navigation throughout the year without adverse environmental effects. Therefore, the FY 1986 budget request includes $4,000,000 for the fourth year of the six-year $12,000,000 River Ice Management research program to develop structural and operational solutions to ice problems in river systems.

Repair, Evaluation, Maintenance, & Rehabilitation (REMR) Research Program

Of the more than 600 Corps-operated-and-maintained hydraulic structures, more than half are over 20 years old, 42 percent are more than 30 years old, and 26 percent were constructed prior to 1940. Many of these structures will reach their 50-year design lives by the turn of the century. Experience has shown that repair and rehabilitation of older facilities requires various types of expertise, some of which are different from those required in connection with design and construction of new structures. Because of this, the Corps has included in its FY 1986 budget request $8,195,000 for the third year of the six-year $35,000,000 REMR program, to study: repair requirements and materials for concrete and steel structures; geotechnical concerns; hydraulic structures of inland and estuarine channels; coastal structures, harbor entrances and channels, and shore protection; procedures for electrical and mechanical maintenance; and environmental impacts of recommended techniques. Solutions to these problems will permit the Corps to respond more efficiently and economically to REMR responsibilities.

Catalog of Future Maintenance and Repair (COFMAR)

Increased effort is being directed to better define and characterize the make-up of the Corps maintenance program. We are now in the process of cataloging all unaccomplished maintenance and repair -- identifying not only the economics and the scope of work involved but also the relative national priorities as determined by the functioning of a project and the severity of the problem. This procedure should facilitate our efforts to program and plan future maintenance requirements, including major rehabilitation, and to develop a more responsive multi-year investment level.

ACTIVITIES UNDER THE FLOOD CONTROL AND COASTAL EMERGENCIES APPROPRIATION

Under Public Law 84-99, Flood Control and Coastal Emergencies, the Corps accomplishes advance planning and preparedness activities to insure rapid response to natural as well as manmade disasters. The FY 1986 budget request is $25,000,000, which is equal to the FY 1985 appropriation. This funding would support the preparedness activities as well as meet a moderate amount of emergency operations requirements.

ACTIVITIES UNDER THE REVOLVING FUND APPROPRIATION

Estimated capital improvement program expenditures in FY 1986 are $81,000,000, including $7,000,000 of new budget authority to be used as follows: $2,000,000 to initiate construction of a replacement dustpan dredge, and $5,000,000 to initiate the Corps of Engineers Automation Plan (CEAP) acquisition program. Both of these items were previously approved by the Appropriation Committees. Expenditures for the Plant Replacement and Improvement Program items, other than the above, will be funded from income generated through the Revolving Fund rental charges for use of Government-owned plant and equipment. From this source we have programmed $5,000,000 for four major new items, including: $750,000 to initiate construction of a riprap test facility at the Waterways Experiment Station; $2,000,000 to complete design and initiate construction of an addition to the Hydraulics Laboratory Building at the Waterways Experiment Station; $750,000 for design and construction of a replacement towboat for the Rock Island District; and $1,500,000 for design and construction of a replacement derrickboat for the Huntington District. The remaining $69,000,000 includes $47,000,000 for continuing major items previously approved for acquisition, and $22,000,000 for design, rehabilitation, construction, acquisition, and additions and betterments of miscellaneous items, such as structures, floating plant, mobile and fixed land plant, small tools, and office furniture and equipment.

ACTIVITIES UNDER THE FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES, ARKANSAS, ILLINOIS, KENTUCKY, LOUISIANA, MISSISSIPPI, MISSOURI AND TENNESSEE (FC, MR&T) APPROPRIATION

Overall Request

The FY 1986 budget request for FC, MR&T of $269,000,000 reflects a financing proposal to derive an additional $33 million in local funds from fees under proposed legislation to be deposited in and appropriated from the Inland Waterways Trust Fund, and is a decrease of $19,000,000 from the FY 1985 appropriation of $321,000,000. Table 1 shows the breakdown by category and class and the number of studies, features, and dollar amounts for FY 1985 and 1986.

Major Highlights

The scheduled completion of the Old River Control Structure is slipping by two months to November 1986, due to inclement weather which delayed placement of revetment works to the next low-flow season. In FY 1985, funds are being allocated to complete mitigation land acquisition for the Tensas River National Wildlife Refuge in Louisiana authorized by Public Law 96-285. During the first quarter of FY 1985, 1.6 miles of main stem levee improvements were constructed and continuing contracts were completed on 17 miles of levee improvements. An additional 3.3 miles of levee improvements are scheduled for completion in the remaining three quarters. The channel improvement program is continuing at a normal pace. The proposed FY 1986 program includes $3,500,000 to continue remedial measures at Sardis Dam in Mississippi under the Dam Safety Assurance Program. One Continuation of Planning and Engineering new start for Nonconnah Creek, Tennessee and Mississippi, is included in the MR&T budget request for FY 1986.

TABLE 1

FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

Feature	Fiscal Year 1985 Number of Features or Studies				Fiscal Year 1986 Number of Features or Studies				Increase or Decrease ($ 000)
	New	Cont	Compl	Amount ($ 000)	New	Cont	Compl	Amount ($ 000)	
General Investigations				4,555				5,470	+915
Surveys, Including Phase I Stage of AE&D	-	8	1	(3,065)		7	1	(2,651)	(-414)
Collection of Basic Data	NA	1	NA	(260)	NA	1	NA	(270)	(+10)
Advance Engineering and Design	-	12	1	(930)	-	2	1	(1,345)	(+415)
Continuation of Planning and Engineering	1	1	-	(300)	1	2	-	(1,204)	(+904)
Construction	-	12	-	246,164	-	9	-	208,650*	-37,514
Dam Safety Assurance	1	-	-	100	-	1	-	3,500	+3,400
Maintenance	-	28	-	100,554	-	28	-	104,995*	+ 4,441
Savings and Slippage				- 30,373				- 20,615	+9,758
TOTALS (FEDERAL AND NON-FEDERAL)				321,000				302,000*	-19,000
NON-FEDERAL FUNDS				-				33,000	+33,000
FEDERAL BUDGET AMOUNT				321,000				269,000	-52,000

* Total Federal and non-Federal program funding. Federal funds to be derived from the General Fund of the Treasury. Non-Federal funds to be derived from fees under proposed legislation to be deposited in and appropriated from the Inland Waterways Trust Fund.

ACTIVITIES UNDER THE GENERAL EXPENSES APPROPRIATION

The FY 1986 budget request for General Expenses is $107,000,000, a decrease of $5,000,000 from the FY 1985 appropriations. The FY 1986 request reflects a freeze at the FY 1985 appropriation level and a $5,000,000 reduction imposed as part of the President's initiative for a 10 percent reduction in administrative expenses. This appropriation, which is essentially for the executive direction and management of the Civil Works program, includes requirements for headquarters, division offices, and four support centers. The cut in funding will be absorbed by: (1) reducing funds allocated from this account for administrative and management activities including field review of studies and technical reports of projects. Instead, the resource expenditures will be accrued to the individual studies and projects involved; (2) delays in the scheduled acquisition of ADP and office automation equipment; and (3) further reductions in travel expenses.

PERMANENT APPROPRIATIONS

The FY 1986 request for Permanent Appropriations is $8,000,000, the same as the the FY 1985 allocation, and is the amount estimated to be available in the Governmental receipt accounts established by law as permanent appropriations to the Corps.

BONNEVILLE NAVIGATION LOCK, OREGON

Chairman HATFIELD. Thank you, General Heiberg.

General Heiberg, I have, perhaps, what is viewed as a parochial question to begin with before I go into the national matters with Mr. Dawson.

I note that in 16 new construction projects, that the new navigational lock at Bonneville Dam was not included. What I would like to ask is, are you familiar with General Bratton's testimony of last year in which he stated that it was one of the most important priorities of all of the projects that the Corps considered? And, in fact, and I quote from part 1 of last year's hearing on page 90:

> General BRATTON. I don't know of any project of this nature, a lock and dam project, that has a higher priority than Bonneville and Gallipolis. We generally lump the two of them together.

Has the Corps changed the priority of the Bonneville navigation lock?

General HEIBERG. Sir, I would only add one point. Yes, I did read that testimony. I recall you kept narrowing down General Bratton to which was the one, and you never quite pinned him down on the first.

I only said one thing slightly different when I was in General Wall's position. I considered the highest priority project to be the Old River Auxiliary Structure because the entire southern end of Louisiana depends on which direction the Mississippi goes.

Chairman HATFIELD. I am talking about new projects.

General HEIBERG. Considering new projects, I would agree with General Bratton, that is an extremely important project. I will defer to the folks on my right about what has happened since General Bratton gave that testimony.

Chairman HATFIELD. First of all, let me ask you, did you request the Bonneville project along with the Gallipolis in your initial budget request?

General HEIBERG. May I let General Wall answer? He was involved in the preparation of the Corps' request.

General WALL. We didn't recommend it in the Army budget request to OMB.

Chairman HATFIELD. You did?

General WALL. No, sir; we did not.

Chairman HATFIELD. Did Gallipolis go through the final review?

Mr. DAWSON. Mr. Chairman, if I might, while we collect our thoughts on that, there has certainly been no change in my view, and as General Heiberg said, the statement was made last year not only by General Bratton but by my predecessor, Mr. Gianelli, as well.

I think the one reason the Gallipolis project was recommended was a feeling that it had a greater urgency because of its dilapidated state and the piling up of traffic there. That does not suggest at all that Bonneville is not on the same plane. But I think there was a feeling that of the two, the most urgency attended the Gallipolis project. But I would reassert that the Bonneville project is extremely important.

Chairman HATFIELD. I am puzzled, General Wall. This is the first time there is any indication that these two projects have been separated from one another. I would like to get to the bottom of this, because they have been moving in tandem right along through the whole planning process, through engineering, and through the authorization process. Now, what is different today with the Gallipolis project from Bonneville?

Was it removed at the political level, Mr. Dawson?

Mr. DAWSON. I believe, Senator, that the feeling was that since we were getting into a new area of the inland projects, this was the very first inland project that had been proposed by the administration, that again the feeling was there was greater urgency with the Gallipolis project as far as its dilapidated state and the traffic that was being held up.

Chairman HATFIELD. Was that the information you got from the Corps, the engineers?

Mr. DAWSON. Yes, sir.

Chairman HATFIELD. I would like to see that.

General Wall, Mr. Dawson has introduced another dimension of comparison between the two projects which in effect separates them. Upon what engineering facts and basis were they separated? Although you say from your engineering public works position you recommended both of them; is that correct?

General WALL. No sir, for this fiscal year, Army recommended only Gallipolis, which has much more usage.

Chairman HATFIELD. From an operational point.

General WALL. From an operational point, there is more use on the Gallipolis than there is on Bonneville.

Chairman HATFIELD. So, Mr. Dawson, tell me again now, what is the new analysis or new basis that you have adopted here to separate these two projects?

Mr. DAWSON. To make sure I tell you exactly right, Mr. Chairman, if I might read from the response we had prepared, anticipating your interest in this.

Given the uncertainties over user fee legislation and the need for fiscal austerity, we selected what we felt was the most—and this was based on the Corps' figures—the most productive project on the Nation's inland waterways. Total tonnage at Gallipolis has resumed its upward growth and in 1984 totaled over 36.8 million tons—a 20-percent increase over the previous year. Because of congestion at the locks, the average delay at the main lock was 3 hours and 39 minutes per tow, which represents a 26-minute, or 13-percent, increase over the previous year. We expect future tonnage increases to substantially increase delays and transportation costs on the Ohio and, accordingly, believe that the replacement of the Gallipolis locks and rehabilitation of the dam should proceed at this time, provided its costs are borne in part by users of the inland waterway system.

While the Department supports authorization of the Bonneville lock, it does not believe the same urgency is there at this particular moment as for Gallipolis. The volume of traffic at Bonneville in 1983, the last year for which data are available, was only about 8 million tons and congestion is not significant at this time. Moreover, a large share of future traffic at Bonneville is tied to future sand and gravel movements, which are not present at this time.

So again, Mr. Chairman, I hope this would not be interpreted as any waning of our support for Bonneville which we have made clear before and certainly continues.

Chairman HATFIELD. Do you have a cost-sharing understanding for Gallipolis?

Mr. DAWSON. Excuse me, sir?

Chairman HATFIELD. Do you have a cost-sharing agreement for the Gallipolis project?

Mr. DAWSON. No, sir. Inland waterway projects do not require a cost-sharing agreement.

Chairman HATFIELD. So it is no different than the Bonneville.

Mr. DAWSON. No, sir.

Chairman HATFIELD. Who wrote that statement for you?

Mr. DAWSON. Well, I wrote it in conjunction with my staff earlier this week, sir.

Chairman HATFIELD. That was not from OMB?

Mr. DAWSON. No, sir.

Chairman HATFIELD. Let me ask you now, Mr. Dawson, when you received the recommendation from the Corps on new starts, you transmitted that in that budget process to the OMB; is that correct?

Mr. DAWSON. Yes, sir.

Chairman HATFIELD. Did you delete Bonneville in your office?

Mr. DAWSON. To be honest with you, Mr. Chairman, I do not recall when the deletion occurred. Maybe I can get some help on that.

My staff tells me, Mr. Chairman, that the Bonneville project, to our recollection, was not included in the final group of new start candidates reviewed by the Corps and my staff for recommendation to OMB.

Chairman HATFIELD. Let me ask you the question so as not to create any schism here within your agency. Did Gallipolis come to you from the Corps?

Mr. DAWSON. Again, Mr. Chairman, I am unclear about that.

Chairman HATFIELD. Could you supply it for the record? Let's not push this any further at this time. Could you supply for the record who originated the request, the new starts, and where in that process Bonneville was dropped?

Mr. DAWSON. Yes, sir.

Chairman HATFIELD. If you will, provide for the record a complete chronology of events leading to its deletion from the budget request.

Mr. DAWSON. We certainly will provide that, Mr. Chairman.

General WALL. I'd like to clarify my earlier remarks, Mr. Chairman. To the best of my recollection, the Corps did not make a formal new start recommendation. In accordance with procedure we have been following for several years, we did not recommend projects for the budget; we did submit to Mr. Dawson a list of projects, together with other supporting information, which met the eligibility and preliminary selection criteria. That list contained those projects which we felt were worthy of further consideration by the Secretary, after we had completed an initial screening of all projects nominated as new start candidates by our field offices. Both the Gallipolis and Bonneville projects were on that list.

[The information follows:]

CHRONOLOGY OF EVENTS LEADING TO THE DECISION NOT TO INCLUDE THE BONNEVILLE LOCK REPLACEMENT PROJECT IN THE FISCAL YEAR 1986 BUDGET REQUEST

1. May 4, 1984.—Field request for fiscal year 1986 new construction starts received by Civil Works Directorate. This request included Bonneville replacement lock project.
2. June 25, 1984.—Director of Civil Works provided to Assistant Secretary of the Army (Civil Works) [ASA(CW)] a list of 30 projects warranting further consideration for fiscal year 1986 new construction starts. The Bonneville project was on that list.
3. Mid-August 1984.—Data from consultant on transportation costs submitted in response to OASA(CW) request for updated economic evaluation, received by Civil Works Directorate.
4. Late August 1984.—Working papers (samples showing projections and use of cost data) pertinent to update of economic evaluation furnished OASA(CW) in lieu of economic evaluation which had not been completed.
5. Early September 1984.—Review of economic input data completed. Bonneville project not included by ASA(CW) in preliminary list of recommended projects.
6. September 14, 1984.—ASA(CW) submitted letter to OMB with a list of new start recommendations, which did not include Bonneville, and a list of projects eligible and meeting preliminary selection criteria which did include Bonneville.
7. November 19, 1984.—ASA(CW) submitted letter to OMB concerning results of new starts negotiations with local sponsors and draft legislation necessary for fiscal year 1986 budget. The letter states in part that, "In the case of inland waterway projects, Gallipolis and Bonneville have been assigned as new starts in fiscal year 1986 and fiscal year 1987, respectively."
8. February 20, 1985.—Legislation submitted by ASA(CW) to the President of the Senate on February 20, 1985, proposes authorization of the Bonneville project.

DECLINE OF CORPS CIVIL WORKS PROGRAM

Chairman HATFIELD. First of all, let me make an observation or two. It seems to me—and I appreciate the position you are in, Mr. Dawson, still Acting Assistant Secretary—is that correct?

Mr. DAWSON. Yes, sir.

Chairman HATFIELD. They have not decided on who to appoint to succeed Mr. Gianelli?

Mr. DAWSON. That is correct.

Chairman HATFIELD. If I were you, I wouldn't want that spot any longer than you can have it. [Laughter.]

I would like to make one or two observations. The budget the President has sent to Congress implies through rhetoric that there is support in this administration for water resources development, but very frankly, my observation is precisely the opposite, because when you look behind the rhetoric, these facts emerge.

While the budget includes some 16 new starts for fiscal year 1986, they are contingent upon new cost-sharing legislation, which goes beyond even some of the previous year proposals. That certainly doesn't show, in my view, any movement by the administration toward a compromise with the Congress on cost sharing.

I happen to be one of those people who supports cost sharing. Senator Byrd and Senator Johnston, Senator Mattingly, Senator Thurmond, Senator Warner, and other Senators, representing inland waterway States and coastal States, worked for over a year in developing an alternative to the administration's cost-sharing program. We thought we had an agreement which the administration through Mr. Stockman had signed off on and approved on the Continuing Resolution. I won't go through the next chapter of that little history because, as you well know, Mr. Stockman reneged on that when it came to the point of adoption, in relation to authorization and appropriations processes.

Nevertheless, let it be understood the Congress has certainly moved very, very effectively in trying to reach a compromise with the administration. But it looks like we are even behind square one now. We are not even up to square one.

This administration proposed a cost-sharing plan that would effectively have decimated most of the ports in this country back in 1983, which led to the effort on the part of the Senators I enumerated and others to come up with an alternative and work that out with the ports of this country—those on the gulf, eastern seaboard, the Great Lakes, and the Pacific coast.

Just to give you one example, if we had adopted the administration's cost-sharing program as initially presented, we would have ended up with probably about three ports on the entire Pacific coast: Long Beach, San Francisco, and Seattle, all being essentially natural deepwater ports. The others would have been driven out and closed down. But, nevertheless, it was a good-faith effort that we made in proposing the alternative.

Now I note, too, as second evidence where the rhetoric does not match facts that the operation and maintenance program is proposed at $1.3 billion, but only $961 million in funding is requested to accomplish the work, which means we have a $355 million shortfall in your budget, as I read it. The $355 million difference is proposed to be made up by user fee, which is, of course, contingent upon authorization legislation being enacted.

Let's look at the Corps' construction program that has gone from $1.6 billion and 185 ongoing projects in 1981 when this administration came into office down to $842 million and 95 continuing projects in 1986. And 13, let me emphasize, 13 of those are scheduled to be completed during fiscal 1986. Let's break that down. This administration has a tendency to want to blame previous administrations for all the problems but also take credit for anything that the previous administration may have done.

Let's take a closer look at the makeup of the Construction Program. Twelve projects, which on average are 55-percent complete, account for 48 percent of the construction, general budget request. But those same 12 projects represent about 55 percent of the actual construction dollars. And, in addition, the Corps overhead expenses represent almost 25 percent of the construction program.

And, General Heiberg, you touched on another problem area, the continued decline in personnel resources—250 FTE reduction in 1986, which makes it difficult for the Corps to carry out its traditional responsibilities in an effective way.

I could go on, but it seems to me that basically what we have here in this budget is a smokescreen for an objective perhaps of the demise of the Corps of Engineers—not supportive of water resource development, not to give it strength to move ahead, but to try to use this kind of budgetary approach to drain the Corps of the kind of support that it needs to maintain its commitments and to move ahead. I think also that the effort to force its cost-sharing proposal on the Congress through the budget process is outrageous. The fact is these user fee proposals offered by the administration really eliminates the user. The fee is not the issue—you eliminate the user. I know what would happen on the west coast.

Now I would like to be less ambiguous in my observations at this point. I would like to give you an opportunity to respond and, hopefully, you can prove me wrong. I would like to be wrong in my assessment, but frankly, I am totally unimpressed by the rhetoric of this budget presentation. I am ready to be converted.

Mr. DAWSON. Thank you, Mr. Chairman. I appreciate your candor there, and certainly there is nothing ambiguous about what you said.

As someone who was probably more intimately involved in developing this budget than others, certainly as much as anyone, I can say to you categorically that there is no intent and there was no intent to drain the Corps. We are in earnest about trying to move ahead on water resources development. There are 29 new start candidates in the budget; as you say, 16 new ones that had not been in previous budgets. We have had movement on cost-sharing since 1981, perhaps not enough, and we certainly have not devised a perfect scheme as yet, and I am not sure anyone else has.

OMNIBUS AUTHORIZATION PROPOSAL

But I believe that the fact that this morning the administration came forward with an omnibus bill, the first time that I am aware of in history that we have brought projects as well as cost-sharing policies forward, is significant.

I think one of the problems in the last Congress was that the administration may not have played seriously, may not have participated at an early enough stage to really help the Congress arrive at a true solution.

Well, I think we have made a big step toward changing that by getting OMB to clear a bill today that gets us into the fray. I hope we stay in the fray in a positive way. Certainly, it is my intent to do that.

There is no intention to blackmail the Congress. I think it would be presumptuous of me to think I could do that, because there is certainly a full recognition that ultimately the Congress will dispose of these issues.

So, Mr. Chairman, in short, I know converting you will take much more than those meager words, but I would hope to have more opportunities to try to do that.

I would simply say again that there is substance behind the rhetoric. I guess we do have to employ rhetoric, but it is not empty and it really is our intention to work with you and work with other Members of the Congress better than we have before, earlier in the process than we have before, to make this work and to find some solutions.

I can't guarantee success at that, but I can guarantee you a very, very sincere, honest effort.

Chairman HATFIELD. Thank you.

May I just indicate one point further and then I want to yield to my colleagues. Let me give you an example. Again I refer to your testimony.

FEASIBILITY STUDY COST SHARING

It seems as though, while I used the term "blackmail," which may be a little strong, that the local sponsors are being required, according to your presentation, to sign 50-percent cost-sharing agreements prior to releasing funds appropriated by the Congress for feasibility studies. Further, the position of the House and Senate committees was clearly stated in the conference report on the Energy and Water Appropriations Bill for 1985, this bill, the current fiscal year, and I quote:

> The conferees direct that no up-front financing or cost sharing of studies or projects be implemented pending enactment of the required legislation.

Let me tell you why we did that, Mr. Dawson. We did that not to avoid cost sharing, but from the standpoint of a lot of these smaller areas who do not have either the technical staff people, resources, or economic base to make the feasibility studies or participate in those studies in the first place. So in effect this administration is saying, if you have the money, then you can provide the evidence of your need. If you didn't have the resources, you don't have evidence of your need. That is why we took that position.

Now, that was direct congressional intent, expressed very explicitly. So I might ask you why do you persist then in trying to force local interests to sign these agreements in spite of the clear congressional intent to the contrary? Do you not recognize the need to enact legislation setting forth the cost sharing before cost sharing is implemented?

Mr. DAWSON. Mr. Chairman, this may be one that I will have a better chance of instantaneous conversion, at least I hope so, because we have not asked for cost sharing on feasibility studies. We are very mindful of this committee's instructions on that.

What we have done, however, is taken those projects that are beginning to finish the reconnaissance phase, which is 100 percent Federal under our own proposal, and asked the sponsors, if and when cost sharing on feasibility studies is enacted, are you able and willing to cost share?

Now, by getting them to sign that letter what we do is avoid the bureaucratic delay and the need to review those reconnaissance studies to see if they should lead to a feasibility study.

I think that is a small price to request. We are not insisting on cost sharing on feasibility studies. There simply is no effort underway in that regard.

We were heartened by the fact that both the House and the Senate omnibus bills endorsed study cost sharing, but we know those weren't passed. It is not our intent to move ahead on that in contravention of your instructions.

Chairman HATFIELD. I won't pursue it at this point, but I would only say that I would like to have you give me an interpretation of your instructions to the districts and to the divisions that infer that study cost sharing could be imposed by the Secretary of the Army at any time under existing authority. That bothers me as well. And also to be able to answer explicitly the question of whether 50–50 agreements are sought before allocation of funds for a feasibility study is made, because that comes right back to our point as to whether it is an up-front requirement or whether it isn't, or whether you are assuming you have the authority to impose these conditions even before legislation is enacted—and against the very specific instructions of the Congress to the contrary.

[The information follows:]

IMPLEMENTATION OF STUDY COST SHARING

The Department has not implemented study cost sharing in light of the report language accompanying recent appropriation acts indicating that new financing arrangements should not be implemented pending a new authorization act. Study cost sharing could be implemented under existing authorities, and in the 1970's study cost sharing was required for the wastewater components of the Corps' Urban Study Program. For this reason, we have been disappointed with the committees' reluctance to support study cost sharing as the most effective means of assuring that the plan that emerges from the preauthorization planning process will be fully responsive to the concerns of the local sponsor.

Chairman HATFIELD. I would like to yield to my colleague, Senator Johnston.

General HEIBERG. Mr. Chairman, before you move on, the first point that you made I think I can say something about. That is the demise of the Corps.

SUPPORT FOR THE CORPS OF ENGINEERS

I have been an OMB watcher since 1969 when I was initiated into the mysteries on how to close down an agency. The agency I was with was closed down. I think I know how to sniff a run on an agency, to include my present one.

I did note in my opening remarks that we do have the same authorization for work-years this year as last. That is one indicator that we do have the confidence of the OMB to stay around. Although next year we are taking a short ratchet down of another 250 spaces, that is not going to be that painful.

Everything that I see in my dealings with Mr. Dawson's office and the OMB is that we have the continued confidence of the OMB for our remaining the water resources agency that we are today.

Chairman HATFIELD. Thank you, General; you are a good soldier. [Laughter.]

I want to go into that manpower with you a little bit later as well, because there is a very interesting corollary to what is happening in the NIH. The administration likes to point to the dollar range of 1985 and 1986, but in the NIH you will see OMB has also issued them an order to reduce their manpower slots which, in effect, is going to cripple more of the operations than if they had reduced their dollars. So there are a lot of clever ways OMB works, I understand, through the manipulations of agencies. But that is part of the game.

Mr. DAWSON. Mr. Chairman, may I add one other point, that the administration's legislation that I mentioned is coming up to the Hill today, which has been cleared by OMB includes authorization for Bonneville and Gallipolis, both.

Chairman HATFIELD. The authorization bill?

Mr. DAWSON. Yes, sir.

Chairman HATFIELD. But not the budget.

Mr. DAWSON. No, sir; that is correct.

Chairman HATFIELD. That is an interesting point. [Laughter.]

This is the Appropriations Committee, as you know. [Laughter.]

That is very interesting. I am very happy to know that.

We had a very interesting session with Mr. Stockman here recently who needed a little assistance on matters. We are getting some response.

Senator Johnston?

Senator JOHNSTON. Thank you, Mr. Chairman.

Mr. Chairman, first of all I would like to associate myself with your comments. This committee is very nonpartisan. It is consistent in its attitude toward construction projects, toward the Corps of Engineers, toward navigation and flood control, and the other activities of the Corps in general. We plan to stay constant and unalterable through the change of administrations and through the change of control of the Senate.

By the way, we hope this veil of tears will be very short, this control of the Senate. [Laughter.]

But nevertheless, whatever it is, we will have our policy consistent on this committee.

First of all, a couple of parochial questions. I say parochial, but they are matters of great concern to the committee. Nevertheless, they concern me especially.

General Heiberg, the phase 1 construction for lock and dam No. 3 on the Red River will be let by the Corps of Engineers in September 1985.

General HEIBERG. Yes, sir.

Senator JOHNSTON. There has been a $90 million request for construction on the Red River Waterway project, but no phase 2 request on lock and dam No. 3.

Now, owing to the budget problems which we have and which we are all aware of, it is not my present plan to ask to increase that overall budget. However, as an engineer, can you tell me whether or not you would be ready to proceed with phase 2 on lock and dam No. 3 if funds were provided in this budget cycle to initiate construction?

General HEIBERG. From the standpoint of being far enough along with the plans and the engineering, I believe we would. I would like to ask General Wall for assistance on that.

Senator JOHNSTON. Yes. Can you tell us about what your capability would be on that?

General WALL. We could start construction if funds were made available.

Senator JOHNSTON. As an engineer, General Wall, would you concur with me that for efficiency of the construction, to maximize the schedule, that it would be a wise thing to commence on phase 2 of lock and dam No. 3?

General WALL. From the aspect of starting it and spending the money now when bids are low, I would say yes.

Senator JOHNSTON. Mr. Dawson, if the Congress should see fit to concur with that engineering judgment, do you know of any reason why that policy should not and cannot be carried out efficiently and faithfully by the Army?

Mr. DAWSON. If that were to be the clear statement of the Congress, no, sir, I don't.

Senator JOHNSTON. No one knows of any engineering judgment that is contrary to that which those questions and answers give?

General HEIBERG. No, sir; I am agreeing that it is not an engineering judgment issue.

Senator JOHNSTON. Very well.

On the question of operation and maintenance and user fees, Mr. Dawson, as I understand it, ongoing projects such as Red River would not be, in your judgment, subject to the user fees for construction.

Mr. DAWSON. Construction; that is correct.

Senator JOHNSTON. There would be no plan to come in during this construction time and subject them to any user fees?

Mr. DAWSON. We certainly have no plans to that effect; no, sir.

OPERATION AND MAINTENANCE USER FEES

Senator JOHNSTON. Very well.

I would like to make one comment on this omnibus bill. On page 6 of your statement that you say that from non-Federal sources, between now and October, you are planning for $400 million for user fees to fund operation and maintenance dredging on the inland waterway system, but from a program not now in place. Do I understand that correctly?

Mr. DAWSON. That is the proposal, yes, sir.

Senator JOHNSTON. Is that really realistic, I mean, realizing how difficult it has been these last few years to get a program in place, to think we will get it nailed down and get all of that collected between now and October?

Mr. DAWSON. Sir, I think your point recognizes that the budget is a living and moving document and just exactly when is the best time to make a proposal and how to phase it in is always a difficult one. I agree with your concern that we don't have much time to move on those matters.

REALITY OF PORT USER FEES

Senator JOHNSTON. Let me just say one thing about user fees. General Heiberg said that there is opposition to them, and there is, but that most accept the fact that they are inevitable.

I don't accept the fact they are inevitable, and not so much because I disapprove of them in that broader ephemeral, philosophical view. The effect the user pays always has a good ring to it and always has some logic to it.

But it seems to me that we never have really thought out, certainly on deep-draft harbors, how that is going to be done, how it really fits together. I think as a political matter it is going to be very difficult to get it all done.

Now, regarding maintenance dredging on the Mississippi River at the Port of New Orleans, there is plenty of traffic on the Mississippi River to get it done. I don't think it is an especially good idea, but if you turn over the unadulterated power to tax traffic on that Mississippi River to the local user, which I would guess would be some newly created organization that would include all the ports up and down the river, maybe some State organization, we can do it.

But I think you are going to find a lot of opposition from other ports. I think there are going to be a lot of ports, and Portland, OR, comes to mind, that will be unable to finance their own part. They might be coming over to us to say give us a little of that money off of the Mississippi River, which we would not countenance very well.

When it comes to inland waterways, you already have a very sick barge industry, a very, very sick barge industry. There are bankruptcies cascading through the industry. One of their people was telling me about a barge owner that committed suicide because he was going broke. I mean it is very, very difficult.

So I stand here not so much as an opponent of user fees but as somebody who realistically wonders whether they can work from a practical, political standpoint and, second, who wonders whether or not they, this nameless, faceless group who comes to accept the inevitability of them, whether they have properly assessed the Federal interest in navigation.

FEDERAL INTEREST IN NAVIGATION

It seems to me when you look at the Federal interest in navigation, the policy constructed by our forefathers and followed for two centuries which says that navigation on inland waterways as well as at deep-water ports has been a Federal responsibility, that is recognized that it is rather difficult to say who are the real beneficiaries. Is it that farmer who wants to transport his grain? Is it that trader who sells it? Is it the grain elevator operator? Is it the barge owner, the ship owner? Just who is it and how do you allocate that cost to them? Or is it not ultimately the American people who benefit from the billions and multibillions of dollars of trade on our inland waterways and who, by the way, have been shortchanged by 3½ hour waits at the Gallipolis Lock through an inefficient system waiting to be refurbished.

I just throw that out, because I don't think it is a foregone conclusion. I mean we have been trying now for 4 years. We have heard the rhetoric about user fees. And if a bill emerges at all, it emerges as jerry-built, thrown together at the last minute, and it never gets anywhere on the floor of the Senate because it is not well thought out. And I wonder whether it can be well thought out.

I haven't looked at this bill you have, or these bills, but I just wonder whether they are any better calibrated to pass muster in the real world, the political world, in the economic world.

It seems to me if you are counting on $400 million in user fees from that sick barge industry, or if you are counting on the political process to work between now and the time that you have to put $400 million on the books, between now and October, it seems to me it hasn't been very well thought out. Maybe we ought to go back and look at it.

I, for one, have been willing and anxious and ready to cooperate with anybody to put together a proper user fee bill if we have to have one. But there have been more of us willing to work on it than those on the other side willing to talk to us. I know last year we sat ready with amendments for months and never heard from those who were sponsoring the bill. Now we stand ready to do that again this year, and want to work with you.

My lack of enthusiasm for user fees does not mean that I won't try to make it workable. But take another look at the Federal interest in navigation, deep-water ports, and trade because I don't think it is necessarily consistent with all of these user fees.

Thank you, Mr. Chairman.

Chairman HATFIELD. Thank you, Senator.

Senator Byrd?

LEVISA AND TUG FORKS OF THE BIG SANDY RIVER AND UPPER CUMBERLAND RIVER, WV, VA, AND KY

Senator BYRD. Thank you, Mr. Chairman.

I wish to thank you, Mr. Dawson, and you, General Heiberg, and you, General Wall, for the cooperation and the good work that has been done and is going forward in connection with the Tug Fork flood control project in southwestern West Virginia.

I also wish to thank our chairman and Mr. Johnston, the ranking member, for the support that they have given to the West Virginia Senators in the past in connection with this particular project.

REPORTS ON WILLIAMSON AND MATEWAN AREAS

I believe, Mr. Secretary, that there will be a report available on nonstructural measures to be implemented in the Williamson area at some time in the near future, and also a report on both the structural and the nonstructural measures to be implemented in the Matewan area.

Do you have any idea when those reports will be available?

Mr. DAWSON. Senator Byrd, if I might defer to Mr. Steinberg for those exact dates.

Dr. STEINBERG. Senator Byrd, the report on the nonstructural elements of Williamson is with the Assistant Secretary at this time and his staff has that under review. If things move as planned, we would be able to implement the nonstructural plan starting in the fourth quarter of this fiscal year.

We hope to have the report on Matewan, both the structural and nonstructural measures, to the Assistant Secretary next month, in March.

Senator BYRD. Very well.

Mr. Secretary, will you provide those reports for the record then when they are available?

Mr. DAWSON. Yes. I can provide the Williamson report now and the Matewan report will be supplied when I receive it

[The information follows:]

WILLIAMSON AREA NONSTRUCTURAL PROJECT

SECTION 202 GENERAL PLAN—SUPPLEMENT TO APPENDIX F

WILLIAMSON PROJECT SUMMARY

HUNTINGTON DISTRICT CORPS OF ENGINEERS

SYLLABUS

The U.S. Army Engineer District, Huntington, West Virginia, has completed this Supplement to Appendix F of the Section 202 General Plan for Project Implementation as directed by various ASA (CW) Memoranda and as authorized by Section 202 of the Energy and Water Development Act of 1981 (P.L. 96-367).

This study primarily concerns flooding problems in the Fairview and East Williamson areas of Williamson, West Virginia which would not be protected by the approved structural floodwall projects at Williamson. The study area extends from river mile 54.0 to river mile 58.6 along the Tug Fork River. Williamson (5,000 pop.) is the County Seat of Mingo County (43,000 pop.) and is the center of the region's coal production area.

The Williamson area has been devastated by numerous floods in the past. A floodwall was constructed to protect Williamson CBD in 1963, but neither Fairview nor East Williamson have any form of flood protection. The April 1977 flood caused severe damages to the Fairview and East Williamson communities totaling $13,000,000 dollars. Again in May 1984 the Tug Fork River flooded these two communities with damages totalling $8,000,000 dollars.

This report addresses the various structural and non-structural alternatives considered for correcting the flooding problems of these communities. The report presents a detailed description of the plans considered and a basis for developing the most cost effective and socially acceptable plan.

The recommended plan consists of a program of floodproofing eligible structures in the floodplain and permanently evacuating structures from the floodplain which, by virtue of their location, cannot be floodproofed. The plan also includes construction of a housing relocation site to accommodate evacuees under the last resort housing provisions of P.L. 91-646. All structures treated under this program would receive April 1977 flood level of protection. Approximately 162 structures could be protected by this plan at a total cost of $9,732,000.

This plan is endorsed by the City of Williamson, Mingo County, the West Virginia Housing Development Fund and the U.S. Fish and Wildlife Service. In summary this plan presents the most cost effective and socially acceptable solution to the flooding problems in these two communities.

I. PROJECT BACKGROUND AND HISTORY

A. Pre-April 1977 Flood. Since the earliest settlements were established in West Virginia and Kentucky in the Tug Fork Valley, flooding has been a serious and frequent occurrence. Located approximately 56 miles from the mouth of the Tug Fork, the City of Williamson, WV is the largest single development center in the Valley with a currently estimated population of about 5,000 persons. The city developed along the narrow floodplains of the Tug Fork as the primary commercial and business center for what is today a coal mining industry of national importance. Coal production in 1982 totalled over 70 million tons in the Valley and comprised 9 percent of the Nation's total output. Coal production for the Valley is anticipated to reach 91 million tons by 1990. Employment in coal mining comprises nearly 25 percent of the total employment in the county. The earliest recorded damaging flood for the

Williamson Area was in 1875 when the Tug Fork rose about 13.0 feet above damage stage. Since that time there have been 36 recorded damaging floods in the Williamson Area.

In more recent times, the Williamson area has been stricken by four devastating floods. Large floods in 1957 and 1963 produced substantial damages in the Williamson Area and resulted in actions to minimize damages by future floods. In late 1963 the Corps completed a floodwall around the Williamson Central Business District to provide partial protection against damages to commercial developments in the Williamson CBD.

Section 90 of the Water Resources Development Act of 1974 directed the Corps of Engineers to provide all communities in the Tug Fork Valley with comprehensive flood protection by both structural and non-structural (floodproofing) measures as generally described in the "Report on Tug Fork, July 1970." This authorization was limited to the preparation of a Phase I Design Memorandum. The Huntington District proceeded under that authority to develop comprehensive flood protection plans for several of the major communities in the Tug Fork Valley, including the Williamson Area.

B. Post April 1977 Flood. In April 1977 the Tug Fork Valley was devastated by the flood of record in the Valley. Flooding at Williamson, WV, exceeded the damage stage by 25.6 feet and overtopped the existing floodwall by 7 feet. Total damages to all land uses within the incorporated limits of Williamson amounted to approximately $78.8 million dollars (October 1983 price level). During the April 1977 flood over 700 residential structures were damaged within the City limits of Williamson. As a result of the April 1977 flooding in the Tug Fork Basin as well as 45 other Appalachian counties, the Energy and Water Development Act of 1981 (PL 96-367) provided authorization for development of flood protection measures in this area. Section 202 of that legislation directed the Secretary of the Army acting through the Chief of Engineers to design and implement, at full Federal expense, flood damage reduction measures, deemed advisable and necessary, at a number of specified communities effected by the 1977 flooding. One of the communities specified by name in the legislation was Williamson, WV.

Based on the Section 202 legislation the Huntington District completed its ongoing planning studies for the Tug Fork Valley and submitted its recommendations as a part of the Section 202 General Plan for Project Implementation to the Assistant Secretary of the Army for Civil Works for approval. The formulation and evaluation of the recommended elements of Plan F-1 were described in Appendix A of the General Plan. The evaluation criteria used in the study and presented in Appendix A included cost-effectiveness, level of protection, acceptability and certainty. Following a field inspection of the Williamson Area and other Tug Fork communities, the Assistant Secretary of the Army for Civil Works, ASA (CW), approved the construction of the structural flood damage reduction measures at West Williamson and the Williamson CBD.

The approved Williamson Area structural floodwall projects consist of floodwalls at West Williamson, and the Williamson Central Business District. The West Williamson project will be approximately 6,300 feet long with 1 pumping station and 2 gate closures. The West Williamson floodwall project will protect approximately 300 structures at a cost of about $49,068,000 (October 1983 price level). The Williamson CBD floodwall will be approximately 3,900 feet in length with 2 pumping stations and 5 gate closures. The Williamson CBD floodwall project will protect approximately 400 structures at an estimated cost of about $25,830,000 (October 1983 price level). Construction on the West Williamson pump station has been initiated and design activities have been initiated on both of the floodwall structures.

C. Post May 1984 Flood. In May 1984, the Tug Fork Valley was flooded again with damages to the Williamson incorporated area of approximately $44.9 million dollars (October 1983 price level). As in 1977, the Williamson floodwall was overtopped causing substantial flood damages ($30.3 million dollars) and the developed floodplain located outside of the areas to be protected by the approved floodwalls suffered extensive damages to residential and commercial properties. Damages to the total Tug Fork Valley amounted to $117.0 million during the 1984 flooding. As a result of the May 1984 flooding, legislation (P.L. 98-332) was passed containing a directive for expeditious implementation of the non-structural features of the "General Plan" with funds appropriated for that purpose. In response to that recent legislation, this Specific Project Report (SPR) presents an array of alternatives which addresses the flood damages in those areas within Williamson that will not be protected by the approved floodwalls and recommends the most cost-effective, socially acceptable and environmentally sound project for implementation.

II. STUDY AUTHORITY AND SCOPE

A. Study Authority. The Williamson Area Non-Structural Specific Project Report is submitted as a Supplement to Appendix F (Williamson Project Summary) of the Section 202 General Plan for Project Implementation. This Appendix is prepared in accordance with and in response to the following Congressional and ASA (CW) directives.

1. Section 202 of P.L. 96-367 (Oct 1980)

a. Authorizes design and construction at full Federal expense of flood control measures at or in the vicinity of Williamson and Matewan, West Virginia, on the Tug Fork of the Big Sandy River, as the Chief of Engineers determines necessary and advisable.

b. Afford a level of protection to these communities and their immediate environs on the Tug Fork River, sufficient to prevent any future losses to the community from a recurrence of a flood such as the April 1977 flood.

c. Non-Federal interests shall operate and maintain all such works after their completion, in accordance with regulations prescribed by the Secretary of the Army.

d. The benefits attributable to the project objectives exceed the costs of the flood control measures authorized by this section.

2. ASA (CW) Memo to the Acting Director of Civil Works (12 July 1982)

a. Approved construction of structural flood protection measures at Williamson, West Williamson, and other Section 202 communities.

b. Stated in part: "In view of the administrative difficulties in providing cost effective and equitable non-structural solutions to everyone in the floodplain, none of the proposed resettlement and floodproofing measures are approved at this time. Other programs such as flood insurance are available to provide relief to property owners outside protected areas."

3. ASA (CW) Memo for the Director of Civil Works (22 February 1983)

a. Stated in part: ". . . As I have previously indicated, the Corps' Cinderella proposal (non-structural relocation site) has not been approved, and I have asked the Corps to look at other alternatives which would be cost effective and not create the problems associated with the development of a new community . . ."

4. House Joint Resolution 492 (P.L. 98-322) (3 July 1984)

a. Stated in part: "Not withstanding current administrative procedures, the Secretary of the Army, acting through the Chief of Engineers, is directed to implement immediately non-structural flood control measures such as relocation sites, flood proofing and flood plain acquisition and evacuation as described in the General Plan for Section 202 Program Implementation.....".

b. Appropriated 21 million dollars to remain available until expended for non-structural measures.

B. Study Scope. This Williamson Area Non-structural Specific Project Report primarily concerns the flooding problems of Fairview and East Williamson, WV, communities included within the incorporated limits of Williamson, WV. This study addresses the various non-structural flood protection concerns and criteria expressed in ASA (CW) and Congressional directives as follows:

1. Provision of April 1977 flood level of protection when consequences due to overtopping would not be catastrophic (ASA (CW) Memo to the Acting Director of Civil Works dated 4 October 1982).

2. Potential administrative difficulties in providing cost-effective and equitable non-structural solutions to everyone in the floodplain (ASA (CW) Memo for the Acting Director of Civil Works dated 12 July 1982).

3. Use of flood insurance to provide relief to property owners outside protected areas (ASA (CW) Memo for the Acting Director of Civil Works dated 12 July 1982).

4. Development of cost-effective alternatives to the Cinderella area proposal (ASA (CW) Memo for the Director of Civil Works dated 22 February 1983).

5. Avoidance of problems associated with the development of a new community (ASA (CW) Memo for the Director of Civil Works dated 22 February 1983).

6. Operations and maintenance of completed flood control works by non-Federal interests (Section 202a of P.L. 96-367 dated 1 October 1983).

7. Immediate implementation of non-structural measures, including relocation sites, floodproofing, and floodplain acquisition and evacuation (House Joint Resolution 492 dated 3 July 1984).

Each of these expressed concerns and implementation criteria are addressed by this Specific Project Report. This report provides detailed analysis of the flooding problems in both Fairview and East Williamson, an analysis of the existing structure conditions, a summary of the socio-economic characteristics of each community, a presentation of various alternatives for providing flood damage reduction to each community, and a summary of the attitudes expressed by the residents towards those alternatives. The report concludes with the recommendation of the most cost-effective and socially acceptable alternative for reducing flood damages to those communities.

III. WILLIAMSON NON-STRUCTURAL STUDY AREA

A. Study Area Description. The area considered in this report extends from the upstream limit of East Williamson, WV (R.M. 58.6) to the downstream limit of Fairview, WV (R.M. 54.0), excluding the Williamson CBD and West Williamson. All of this area, extending 4.6 miles along the Tug Fork River in West Virginia is included within the incorporated limits of the City of Williamson. The study area encompasses the entire floodplain area effected by the April 1977 flood. There are about 176 primary structures in the study area (Fairview, 78; East Williamson, 98) which were affected by the April 1977 flood. Both of the communities are primarily residential in nature (82 percent of all structures are residential), with single-family detatched homes the predominate structure type. Figures 1 and 2 below show the character of each community. A more detailed description of the structures and residents is included in Section V.B. of this report. Exhibit No. 1 shows the study area and the approved floodwall projects.

The Williamson project area is a portion of the specific project element designated TF-1 Williamson Area, as described in Section 4a, Tug Fork Basin, of the General Plan. The study area presented in this report is an initial increment of the total TF-1 element. This incremental approach was necessary for two reasons. First, TF-1 included the implementation of non-structural measures along 18.3 miles of floodplain in West Virginia and affected 474 residential and commercial units within the reach. As an initial increment of non-structural flood protection in the Tug Fork Valley, the magnitude of potential residential relocations in TF-1 (404 units) could have presented extraordinary monitoring and evaluation difficulties from which no clear assessment of the program could be presented. Secondly, although flood damages in the Tug Fork Valley were high in the May 1984 flood, the communities of Fairview and East Williamson, WV, suffered disproportionately considering the number of units damaged and the total dollar damages inflicted in that flood.

This proposed initial increment includes 25 percent of the stream miles contained in TF-1 and 37 percent of the effected structures included in TF-1. Limiting the study area will facilitate an effective monitoring and evaluation process for assessing the non-structural program and will target appropriated funds to communities within the incorporated limits of Williamson which were most severely damaged in May 1984.

B. Williamson Area Residual Flood Damages. Although the approved floodwall projects will significantly reduce damages in the Williamson area, residual damages to the unprotected communities of Fairview and East Williamson were substantial during the April 1977 and May 1984 floods. Table 1 displays the damages for these two communities. As shown on the table, about 80 percent of the units damaged in April 1977 were damaged again in the May 1984 flood which was approximately a 50-year frequency flood in the Williamson Area. Total dollar damages in May 1984 were about 60 percent of those in April 1977. Total damages to these two sections of Williamson amounted to about $13 million dollars in April 1977 and about $8 million in May 1984. Placed in perspective with the total damages suffered in the Williamson Area, these two communities sustained 25 percent of the total damages in the City in April 1977 and 17 percent in May 1984.

Table 1
Flood Damages During April 1977 & May 1984
Fairview & East Williamson Communities

Damages	Fairview		East Williamson	
	1977[1]	1984	1977[1]	1984
Residential Units	66	57	92	76
Dollar Damages	$1.405.0	$ 633.0	$1,381.0	$ 611.0
Commercial/Industrial Units	12	6	6	4
Dollar Damages	$6,413.9	$3,935.0	$2,123.0	$2,108.0
Other Damages	$ 682.0	$ 387.9	$1,233.0	$ 491.0
Total Units Damaged	78	63	98	80
Total Damages	$8,500.9	$4,955.9	$4,737.0	$3,210.0

[1] Shown in October 83 price level.

C. Socio-economic Effects of Flooding. Since both Fairview and East Williamson function essentially as bedroom communities supporting the basic commercial areas of Williamson and West Williamson, flood losses to these communities are particularly damaging to the entire economy of the City and the region. The short term losses include structure damages, lost business days and damages to municipal facilities operated and maintained by the City. Some of these costs are recovered by flood insurance payments, emergency funds and subsidized loans. However, the long term costs associated with lost business and occupation taxes, deterioration of municipal facilities and reductions in businesses and population following each flood seriously lessen the ability of the municipal government to function efficiently. The continuing deterioration of both residential and commercial properties in the study area is an ongoing perversion of normal urban and suburban processes.

This process was best illustrated in the aftermath of the May 1984 flood. The City of Williamson had entered the regular phase of the National Flood Insurance Program prior to May 1984 and had enacted the required floodplain zoning ordinances throughout the incorporated limits of Williamson. Following the May 1984 flood, owners of eight residential structures and five commercial properties were unable to restore their structures due to the restrictions contained in the floodplain ordinance. Several of these residents chose to move out of the Williamson area. Local impact studies indicate that floodplain regulations combined with the financial burdens of second and third mortgages for recovery from previous floods to this date have prevented all but one of the affected businesses from reopening. This degenerative process was not as pronounced following the April 1977 flood because floodplain ordinances were not in effect at that time. In the long term, recurring floods in Fairview and East Williamson will continually drain jobs and population from the City of Williamson effecting business tax revenues, property taxes, Federal and state loan and grant eligibility, the funding of essential city services, and ultimately the viability and productivity of the area's coal mining industry.

IV. ALTERNATIVE MEASURES TO REDUCE RESIDUAL FLOOD DAMAGES

An in-depth description of the various project alternatives for the Williamson Area is included in Appendix F "Williamson Project Summary" of the Section 202 General Plan. Those alternatives are summarized below:

A. Upstream Tributary Impoundments. Two tributary impoundments, Panther Creek and lower Knox Creek, are potential alternatives to reduce flood damages in the Williamson Area. Both of these projects have been evaluated individually and in combination. In all cases it has been concluded that these tributary impoundments do not control a large enough volume of basin runoff to reduce flood heights in the Williamson area significantly. A detailed evaluation of these two projects is included in Appendix A, Section II.A.2., Retarding Structures of the General Plan. This alternative is not effective in reducing damages and is not cost-effective compared to other alternatives.

B. Tug Fork Main Stem Impoundment. This alternative is effective in reducing flood damages throughout the Williamson Area but is extremely expensive. The dam structure would be located at river mile 82 just upstream of Vulcan, WV, and would impound a 28-mile long lake containing 450,000 acre-feet of flood storage. Flood reductions at Williamson, WV, would be approximately 14 feet on the 100-year frequency flood. Such reductions would decrease damages in the Williamson Area significantly. Impoundment of the lake would require the relocation of 23 miles of mainline N&W Railway, 7 miles of highway and 515 families from the project area. The amount of relocations necessary to implement this alternative and the extremely high cost remove this alternative from further consideration. In current prices, the implementation cost for such a project could exceed one billion dollars.

C. Flood Insurance/Floodplain Zoning. The combination of floodplain zoning and the National Flood Insurance Program can contribute to reducing financial losses due to flooding. In the Williamson area, the sole use of floodplain zoning and flood insurance as a solution to flood damages is not effective. The combination of dense development and recurring high flood damages results in frequent heavy losses to the local economy (business taxes) and many financial losses (lost business) not reimbursable by flood insurance. This alternative is best used in combination with other damage reduction methods.

D. Flood Warning and Emergency Evacuation. The installation and operation of an effective flood warning system and a well coordinated and efficient emergency evacuation program can produce reductions to flood damages and reduce the likelihood of fatalities during flooding events. Such a system allows residents and businesses the opportunity to relocate or evacuate structure contents and other damagable property prior to flooding. Residual damages to remaining structures and immobile facilities are not reduced by this alternative. Due to the ineffectiveness of this alternative as a single solution for reducing flood damages, it can only be effective when used in combination with other methods.

E. Channel Modification. Channel enlargement, channel deepening and channel straightening are generally most effective on small to medium sized streams and where adjacent developments are located so as not to limit channel improvement work. Widening the stream channel and straightening occasional meanders to increase channel capacities and velocities can provide significant reductions in flood heights. However the Tug Fork River flows through deeply dissected topography where most of the flood damageable property is clustered within the narrow floodplain. Widening the Tug Fork River sufficiently to provide substantial flood height reductions for floods like the April 1977 flood would require the relocation of most of the structures and facilities needing protection. Such a counter productive method of reducing flood damages due to large floods is not an effective solution to flooding problems in the Williamson Area and was dropped from further consideration.

F. Floodwalls and Levees. The use of structures such as floodwalls and levees to protect floodplain developments is a common and effective solution in instances where damaged structures are densely clustered. Most of the development along the Tug Fork is situated in linear patterns along the stream making floodwalls and levees ineffective for many of the valley structures. However, areas such as West Williamson and the Williamson Central Business District contain densely developed commercial districts and clustered residential developments suitable for protection by these measures. The approval of the Williamson area floodwall projects indicates the effectiveness of this alternative as a singular solution for select communities. This structural alternative was retained for detailed evaluation.

G. Floodproofing. As noted in Section III.C. of Appendix F to the General Plan, there are several methods of floodproofing which can be used to reduce flood damages to floodplain structures. These methods include raising structures in-place; sealing walls, doors, and windows with closures and applied sealants; constructing veneer walls and dikes around structures; and relocation of structures to adjacent flood-free property. These measures, when implemented according to standard engineering/architectural practices, have been proven to be safe and cost-effective methods of reducing flood damages. Generally, floodproofing measures have been accepted by floodplain residents as effective solutions to recurring flood damages.

Engineering studies completed prior to the submission of the General Plan established the structural feasibility of raising the first floor of sound structures in-place upon new foundation walls to a maximum height of 12 feet. Raising a structure to this maximum height necessitates the use of double wall construction on the lower 4 feet of the new foundation wall and the filling within and around the new foundation walls so that only 8 feet of foundation wall is exposed to flood waters. The "basement area" created by raising each home in-place would be designed to allow intentional flooding of the basement area to equalize hydrostatic pressures during flooding and to allow drainage of the basement area following the flood. For this reason no damageable physical improvements would be allowed in the newly constructed "basement area" of floodproofed structures.

Structures also can be floodproofed by reinforcing and sealing walls, doors, and windows to prevent damages to the structure interior and contents. This technique requires specially fabricated closures and chemically applied sealants and depends on structure soundness, location within the floodplain, and existing use (showroom versus warehouse) of the structure. This technique has been successful for commercial structures which cannot be raised-in-place or relocated due to a prime location within the market area. Application of this technique is restricted to structures with less than 8 feet of flooding due to the technical difficulty of reinforcing roof structures to withstand vertical water pressures.

Floodproofing also can be accomplished by physically moving a structure to an adjacent flood-free site. This technique is generally limited to small frame structures and mobile homes in locations where adjacent flood-free sites are available. The piecemeal character of this form of relocation is very expensive due to requirements for structure access and utilities at numerous sites.

Generally floodproofing measures are very cost-effective on a per unit basis and provide a high degree of flood protection in specific areas of the floodplain. For this reason, floodproofing was considered in detail for reducing residual flood damages in the Williamson Area.

H. Floodplain Evacuation and Resettlement. Evacuation of floodplain areas and resettlement of floodplain residents can be an effective solution for reducing flood damages especially in situations where protection in place or floodproofing options are not feasible or cost effective. Two conditions have been found to be necessary for a successful floodplain relocation program within the Tug Fork Valley. The first requirement is the identification and development of locally acceptable flood-safe relocation sites. Relocation sites must provide a suitable environment for home construction and protection for long term investments. Sites must also be located such that operation and maintenance is assured by a public or private sponsor and so that relocatees' normal social patterns are not totally disrupted. The second requirement is a willing market of potential relocatees. Participants in a successful relocation program must be provided with socially acceptable relocation options which are founded on a clear understanding of the local needs. For this reason, specific surveys and interviews must be used in designing relocation sites.

Since many of the structures located in the floodplain in the Williamson Area would not be eligible for floodproofing or protected by an approved floodwall, resettlement was considered as a potential solution to flood damages.

V. DETAILED ALTERNATIVE FORMULATION FOR THE WILLIAMSON STUDY AREA

Several of the macro-alternatives provide effective reductions in flood damages within a reasonable range of cost-effectiveness. Those alternatives are reviewed below in detail.

A. Floodwalls and Levees. Both floodwalls and levees were evaluated for the Fairview and East Williamson communities. Generally, levees were found not to be feasible due to the amount of right-of-way required to place the levee in either of the two communities. Neither Fairview or East Williamson contain sufficient land area between existing structures and the Tug Fork River to construct a levee to the mandated level of protection. Therefore only floodwall projects were evaluated for these communities. In accordance with Section 202 language and ASA(CW) directives, the April 1977 flood level was used as the target level of protection for plan comparisons.

1. Fairview Floodwall. The potential Fairview floodwall would be 4,400 feet in length and approximately 17 feet high. One 10,000 GPM pumping station would be required to handle interior drainage and three gate closures would be necessary to accomodate the railroad and U.S. Route 52. Exhibit 2 shows the approximate alignment of the floodwall and pumping station. As shown on the exhibit, the floodwall construction would require the forced relocation of 17 residential structures and 2 commercial structures in the community. This relocation constitutes about 24 percent of the structures being protected by the floodwall. Additional severance damages would result to several other residential properties because of work areas required during construction.

The total cost for construction of the Fairview floodwall, including real estate acquisition is $17,820,000 (October 1983 price level).

2. East Williamson Floodwall. The East Williamson floodwall would be approximately 2,600 feet in length and about 15 feet high. One 60,000 GPM pumping station would be required to control interior flooding. As shown on Exhibit 3, the floodwall alignment would be located along the N&W Railway property and would effect the mainline tracks within the classification yard. No residential or commercial structures would be relocated to construct the floodwall.

The total cost for construction of the floodwall including the cost of relocating N&W Railway trackage is $14,314,000 (October 1983 price level).

B. Floodplain Evacuation and Floodproofing. The applicability and effectiveness of floodplain evacuation and floodproofing for those households located outside of the approved Williamson area structural projects is well documented in Appendix F - Williamson Project Summary of the Section 202 General Plan. Determining the feasibility of using non-structural measures to reduce flood damages in Fairview and East Williamson requires an analysis of the structure types located in these communities, consideration of the flood heights experienced during the April 1977 flood, an analysis of the residential relocation needs and alternative housing development sites in the Williamson area and comparison of the relative unit costs for each of these measures.

1. Structure Analysis. As shown in Table 2 both Fairview and East Williamson contain a mixture of structure sizes and types. Approximately 65 percent of the residential units are single story structures and over 55 percent of the total residential structures are of wood frame construction. One third of all of the residential structures are of masonary construction and over 45 percent of the residential structures have basements. The quality of the housing is indicated by the low percentage (7%) of units classified as dilapidated. Both homes and residential lots are larger in Fairview than East Williamson.

Table 2
Structural Analysis
Fairview and East Williamson
(Floodplain Units)

Structure Data	Williamson Area	Fairview	East Williamson
Residential			
Total Units	158	66	92
1 story	105	31	71
2 story	53	35	21
Basements	76	24	52
Wood frame	89	14	75
Masonry	50	31	19
Other	27	21	6
Dilapidated	12	1	11
Lot Size (Avg sq ft)	12,100	19,000	5,000
Floor Area (Avg sq ft)	1,300	1,600	1,000
Commercial			
Total Units	18	12	6
1 story	18	12	6
2 story	0	0	0
Basements	4	0	4
Wood frame	0	0	0
Masonry	12	7	4
Other	6	5	2
Dilapidated	0	0	0
Floor Area (avg sq ft)	17,500	29,000	15,000

Commercial units in the Williamson Study area are predominately single story brick structures with few basements. Commercial structures tend to be larger in floor space in Fairview than in East Williamson. None of the commercial structures are dilapidated and each of the commercial units is presently occupied.

2. Residential and Commercial Analysis

a. Housing Survey. As discussed in Section IV.A.8. of this report, floodplain evacuations and resettlement can be an effective method of reducing flood damages to both residences and commercial structures. A successful resettlement program must consider two critical factors. The first and most important factor concerns the housing needs of those floodplain residents who will be resettled. The second factor concerns the resettlement site itself and the quality of housing provided for the relocatees. Floodplain residents who participate in the program must be assured that the resettlement home will be comparable in quality, cost, and convenience to their present floodplain residence.

In order to determine the existing conditions of the floodplain housing in the area and some basic socio-economic characteristics of the occupants, a detailed housing survey was conducted within the study area. Table 3 displays a summary of the housing and occupant characteristics of the study area. As shown on the table, there are some distinct differences between Fairview and East Williamson regarding the types of housing and the economic capability of the occupants to purchase new housing. Generally, there is a greater percentage of single-family, detached home ownership in Fairview (94 percent) than in East Williamson (67 percent), and monthly mortgage payments are over 200 percent greater in Fairview than in East Williamson. Residences in Fairview are generally larger in floor space and are situated on larger lots than residences in East Williamson. Of the 12 dilapidated residential structures found in the study area, 11 are located in East Williamson. These figures are indicative of the better housing quality found in Fairview. Rental housing is more prevalent in East Williamson (33 percent of units) than in Fairview (6 percent of units), but monthly rental payments are over 200 percent greater in Fairview.

The mean age of the household heads in both communities is 52 years, indicating an older population of one- and two-person households (one- and two-person households account for 50 percent of the total units). Family incomes are significantly different in the two communities. About 90 percent of the East Williamson households earn less than $20,000 annually, while 79 percent of the Fairview households earn in excess of $20,000 annually. More indicative of this economic disparity is that 42 percent of the East Williamson households earn less than $10,000 annually, while 33 percent of the Fairview households earn in excess of $40,000 annually.

Table 3
Study Area Housing Characteristics

Parameter	Fairview	East Williamson
Total Residences	66	92
Structure Type		
Single Family	97%	82%
Multi-Family	3%	18%
Lot Size (avg sq ft)	18,312	3,343
Household Size		
1 person	11%	26%
2-3 persons	64%	51%
4-6 persons	25%	21%
>6 persons	0%	2%
Tenure Type		
Owner	94%	67%
Renter	6%	33%
Number of Rooms		
1-4	7%	23%
5-7	56%	70%
>7	37%	7%
Floor Space (avg sq ft)	1,600	1,000
Mortgaged Homes		
Number	50%	29%
Monthly Amount	$402	$175
Monthly Rental Payment (excluding utilities)	$300	$134
Family Income		
<$20,000	21%	90%
>$20,000	79%	10%
Head of Household Age	52	52
Flooding Experience		
April 1977 Flood	62%	87%
May 1984 Flood	92%	70%
Flood Insurance	85%	63%

Simply stated, Fairview is composed of an older, upper middle income population residing in above-average quality homes, while East Williamson contains an older, low-income population living in below-average to average quality homes. This disparity in structure quality and income could account for the difference in number of homeowners having flood insurance in the two communities (Fairview, 86 percent; East Williamson, 63 percent).

Most of the social activities engaged in by the residents of these communities are centered in Williamson, West Virginia. Travel for routine social activities such as shopping, banking, school, car repair, church, recreation, and medical aid is contained within a zone approximately 5.4 miles in diameter centered at each community. Some exceptions for specialty medical and work-related travel exceeded 20 miles beyond the local norm.

b. Residential. The non-structural program is proposed as a strictly voluntary program. The Corps would utilize condemnation procedures only to acquire housing relocation sites, to clear encumbered deeds or to reach a price agreement with voluntary floodplain sellers, and to remove scattered remnants of an evacuated community to provide manageable units of the evacuated floodplain for the local sponsor to administer. Based on past experiences of mandatory relocation efforts by Federal and state agencies in the Tug Fork Valley, the strong social ties of residents in the valley, and research conclusions based upon the sociological and psychological effects of housing relocations, the use of mandatory relocations and floodproofing was not advisable. The acceptance of the voluntary non-structural program was reinforced by the results of the housing survey conducted in the Williamson Area. In order to determine the housing needs of those floodplain residents who would choose to relocate, households were presented with a range of options concerning resettlement processes and replacement housing types during the housing survey. Basic participation rates were developed based on the field interviews with anticipated program participants. It is anticipated that 95% of those eligible for floodproofing will choose to participate in the program. Of those households eligible only for evacuation it is anticipated that 90% will choose to participate in the program.

Of those choosing to evacuate from the flood plain, 59% indicated a desire to relocate to a resettlement site. Forty-one percent indicated a desire to find replacement housing on their own. However, it is anticipated that a shortage of housing caused by floodwall related relocations would increase the resettlement site participation rate from 59% to about 80%.

c. Commercial. There are 18 commercial structures located in the two communities in the study area. Surveys of those businesses were done in conjunction with the residential survey described above. Results from the survey were not conclusive and appear to depend on the particular market needs of each business. Either relocations or floodproofing in-place were preferred by most of the businesses. About 75 percent of the businesses have flood insurance at the present time. Also, 85 percent of the businesses indicated that they could reduce their damages due to flooding by moving damageable property to flood-free areas, provided that adequate warning times were available.

d. Acquisition/Relocation Requirements. All property acquired in this plan would be accomplished under the authority of Section 202 of the Energy and Water Resources Development Act of 1981 (P.L. 96-367). All relocations affected under the non-structural program would be guided by the Uniform Relocations Assistance and Real Property Acquisition Policy Act of 1970 (P.L. 91-646). Considering the total number of potential floodplain residential relocations under this program, the District Real Estate Division assessed the capability of the housing market to supply the necessary units for relocatees. Based on a study of the current and projected vacancy rates and new housing production in the market area, it was determined that there was an insufficient supply of decent, safe and sanitary (DSS) replacement housing. Depletion of the housing stocks by past flooding and the loss of developable floodplain lands due to the floodplain ordinance restrictions have reduced the number of available residential units. Therefore, a determination, was made based on these findings, that the last resort housing provisions of P.L. 91-646 would be applicable for this program.

Under these provisions, comparable DSS replacement sale or rental housing must be made available (either acquired, rehabilitated, relocated, or constructed for relocatees to occupy) before a project can proceed to construction. The Act further provides that such replacement housing must be affordable to relocatees and so located that the work place and social amenities are convenient. However, the Act does not provide for such assistance to commercial uses which are acquired through the program. Relocation assistance to non-residential owners would consist of advising businesses in the location and purchase of suitable replacement structures or developable land for reestablishment.

e. Production of Additional Replacement Housing. Based upon the mandate and criteria in the Act, the production of replacement housing stock was studied for the non-structural program. Several methods of housing production were investigated, including the acquisition and rehabilitation of existing vacant units to meet DSS standards for replacement housing, the physical relocation of vacant floodplain housing to provide DSS replacement housing, and the construction of new DSS housing at flood-free sites. The lack of vacant floodplain or dilapidated housing suitable for relocation or rehabilitation as replacement housing severely hampers these methods of housing production. The only vacant structures located in the area were abandoned commercial structures in the Williamson CBD which could be adaptively reused as replacement housing units. However, all of the units identified are better suited to commercial uses following completion of the approved floodwall project.

The most feasible means of providing additional replacement housing in the Williamson area is by the construction of new housing in flood-free subdivisions. There are three primary concerns involved in the production of new housing resources for replacement dwellings. The first concern is the actual identification and construction of new subdivision sites in the study area. The second concern is the process by which floodplain occupants are resettled into the new housing units. The third and most critical concern is the long-term operation and maintenance of the subdivision sites and evacuated floodplains. Regardless of the technical expertise involved in locating and constructing the subdivisions, or the administrative skills used to place relocatees into their new homes, the long-term success of the relocation program will depend upon the systems which assure the responsible operation and maintenance of the new subdivisions and regulate the uses of the evacuated floodplains in the future. Each of these three concerns is discussed in the following sections.

3. Identification and Evaluation of Relocation Sites. Five main criteria were considered in the identification, evaluation and selection of potential resettlement sites for residential uses: distance from relocation areas, site character/development feasibility, availability of necessary public services, unit cost, and future operation and maintenance of the site. As shown on Exhibit 4 a number of potential resettlement sites were identified in the Williamson Area. Each site was evaluated based on the optimum development of a mixture of housing types. Site design criteria were based on housing development regulations prepared by FHA and HUD - the anticipated mortgage financing agencies. A description of each potential site and its development feasibility is listed below:

a. Lick Creek Site. This site is located in a tributary valley of the Tug Fork approximately 3.2 miles upstream from the Williamson CBD. The site has access to Williamson via State Route 49 and 1.2 miles of gravel road. The site was utilized after the April 1977 flood by FEMA as an emergency temporary mobile home site for flood victims. Since that time a large coal mining and processing complex has located in the lower section of the site utilizing a part of the original development site for its facilities. There are no existing water or sewer systems in the area and the nearest connection to those public facilities is in East Williamson (approximately 1 mile). With excavation and careful siting of structures approximately 30 housing units could be developed at this site. This site is located about 1.1 miles from the Williamson incorporation limit and could be annexed by the city for O&M purposes. Total site costs for the Lick Creek Site are about $2,848,000.

b. Sycamore Creek Site. This site has been identified as a good residential site since the development of the General Plan. The site is located along Sycamore Creek about 2.4 miles from the Williamson CBD. Access to the site is over US Route 52/119. The site contains the existing Cinderella Elementary School and three residences. Located at the head of the valley is a large coal processing facility which ships coal out of the Valley by a single track siding running the length of the site. The coal company owns extensive surface and subsurface rights in this area. The available land area for housing development is restricted at this site due to these land holdings. No public sewer or water system is available at the site but connections are available at East Williamson. Approximately 32 housing units can be developed for residential uses at this site. This site could be annexed by the city for O&M purposes. Total site costs for this site are $2,236,000.

c. Williamson Ballfield Site. This site is located within the incorporation limits of Williamson, WV, and is situated on an old football field which is used only for high school practice and jogging at the present time. The site has access to Williamson by city streets and municipal water and sewer connections are located at the edge of the site. Extensive earthwork will be required to produce any type of residential development, but the most economical development would provide 30 units at a total cost of about $4,320,000.

d. Buffalo Creek Site. This site is located about 3.8 miles from Williamson and is accessible from US 52/119. The major portion of the developable land is a spoil site created by the West Virginia Department of Highways during the upgrading of US 52/119. The site contains about 7.1 acres of developable land for residential uses. Water and sewer facilities are available from the Town of Delbarton, WV, approximately 1.2 miles from the site. Approximately 50 residential units could be developed at this site for a total site development cost of $2,156,000.

e. Valley View Site. This site is located about 2.4 miles from downtown Williamson and accesses US Route 52/119 directly across from the entrance to the Sycamore Creek (Cinderella) Site. The site consists of a 16-acre valley fill area placed by nearby coal mining operations. The site is relatively flat and, based on preliminary field studies, could support residential development. Water and sewer connections are available from East Williamson, and the City of Williamson could annex this site for O&M purposes. About 85 housing units could be constructed on this site at a total site development cost of $2,453,000.

All of the identified sites are located above the April 1977 flood elevation and each site could be developed suitably for residential structures. Preliminary site plans were developed for the sites based upon the optimum mix of housing units identified in the hoursing survey. Site development costs were based upon access roads, streets, grading, drainage structures, sewer and water distribution, street lighting, and real estate acquisition. Design standards from HUD and FhMA were used to prepare the plans and cost estimates due to those agencies' involvement in the long-term mortgaging responsibilities of any housing project in the region. The City of Williamson and the West Virginia Housing Development Fund have been consulted in the evaluation of these sites and involved in preliminary planning for the sites. The economic evaluation of the sites is shown in Table 4 below. Based on a per-unit cost, the best three sites are the Valley View Site, Buffalo Creek Site, and the Sycamore Creek Site. The long-term availability of relocation sites is uncertain due to the mobility and extensive land holdings of the coal industry. Since the submission of the General Plan, at least two of the prime housing relocation sites in the Williamson area alone have been rendered unstable or seriously degraded due to the introduction of coal facilities. Losses of additional prime development sites will increase the incremental costs of relocations for the Valley.

Considering the aspects of access, distance from Williamson, cost-per-unit, development suitability, and unit capacity, the Valley View Site would be the optimal site for initial development. A description of the proposed development of this site is included in Section VII of this report.

Table 4
Economic Comparison of Resettlement Sites

Sites	Total Site Cost 1/	Capacity (Units)	Per-Unit Cost
Valley View	$2,453,000	85	$ 29,000
Buffalo Creek	2,156,000	50	43,120
Sycamore Creek	2,236,000	32	69,875
Lick Creek	2,848,000	30	94,933
Williamson Ballfield	4,320,000	30	144,000

1/ Includes site grading, streets, access road, utilities, real estate, and landscaping.

4. Nonstructural Formulation. Flooding in Fairview during April 1977 resulted in flood depths of between 2 and 15 feet above the first floors of damaged structures in East Williamson flood depths were between 3 and 17 feet over first floors. Exhibit 5 generally indicates the area where floodproofing would be practicable. Exhibit 6 indicates the zone where only evacuation

would be an available option because of excessive water depths, high velocities or location of a structure within the floodway. It should be noted that Exhibits 5 & 6 were developed on USGS mapping and are only intended to show the zones where floodproofing and evacuation would take place. Evaluation of structures to be raised and to be removed from the floodplain was based on detailed floodplain mapping and field surveys and in accordance with the criteria outlined in Section G on page 9.

The April 1977 flood damaged 158 residential structures. Of this number 56 are suitable for floodproofing and 100 are located such that evacuation is the only available option. Of the 100 households that are eligible only for evacuation it is anticipated that based on the field survey 90% or 90 of these will choose to participate in the program and relocate. Of these 90 households 80% or 72 will most likely move into the resettlement site. Of those structures eligible for floodproofing, 38 would have to be raised between 2 and 8 feet. Based on field interviews it was estimated that participation would be 95% in this category resulting in 36 raised structures. The remaining 20 structures would have to be raised between 8 and 12 feet, it was assumed that participation by those in this category would be 100%. The total number of structures to be raised would be 56. As has been noted previously, raising structures has been limited to 12 feet. Raises beyond 12 feet entail major changes to public utilities, streets, roads and generally present significant access problems to residents.

The 1977 flood damaged 18 nonresidential structures. Water depths for these structures exceeded 12 feet precluding the options of raising or floodproofing. Based on the survey it is anticipated that 16 of these structures will choose to participate in the program. There are a few vacant tracts of land located in the Williamson CBD which could be utilized for relocation of these structures. Retaining these businesses is of paramount importance to the City of Williamson. As the market area of these businesses is local in nature it would be impractical to relocate them outside their current area.

5. Evacuated Floodplain Areas. Based on current investigations of the floodplain areas within the Williamson non-structural study area, there are approximately 60 acres located within the zone shown on Exhibit 5 where floodproofing would not be applicable and relocation would be the sole option given the owner. Once the relocations are completed and those floodplain residents are resettled into the relocation housing site or sites of their own choice, the remaining evacuated structures and facilities would be demolished and the floodplain lands would be restored by grading and seeding to a natural floodplain appearance. All evacuated floodplain lands would be turned over to the local sponsor (Mingo County) in accordance with the executed Section 221 Agreement. All lands turned over to the local sponsor will be subject to certain restrictions governing the use and future development of the evacuated floodplain.

The restrictions and permitted uses of the evacuated floodplain lands will be in accordance with the recently established floodplain ordinance administered by the City of Williamson. Incumberances on the floodplain deeds will include restrictions against the construction of buildings, placing fill materials, or locating damageable property within the evacuated floodplain. Under the Local Cooperation Agreement, violations of the restrictions will be the responsibility of the local sponsor.

A number of uses compatible with floodplain areas would be permitted on the evacuated lands. These uses would include gardening, farming, recreation fields, picnicking areas, walking trails, plantings for wildlife habitat, jogging paths, and pleygrounds. These uses would be developed, operated, and maintained by the local sponsor or by lessees of floodplain property. Specific zones for these uses will be delineated by the Corps and the local sponsor prior to the initiation of floodplain acquisitions to insure compatability between adjacent uses and conformance with project objectives. Any leases or outgrants will be undertaken in accordance with standard real estate procedures to assure equitable treatment.

Certain portions of that land would be made available for creation of wildlife habitat to offset project related environmental impacts at the approved West Williamson and Williamson CBD floodwalls. Section 7.E. of this report discusses the mitigative aspects of the non-structural plan in detail.

VI. EVALUATION AND SELECTION OF ALTERNATIVES

Each of the flood damage reduction alternatives examined in detail for the Williamson Study area were evaluated under the criteria set forth in the Section 202 General Plan, Appendix A, Paragraph C, Comparison of Detailed Plans, and in accordance with criteria set forth by ASA (CW) for evaluating the Section 202 Program elements.

A. Efficiency. Due to legislative requirements contained in Section 202 authorization, the measure of efficiency used to evaluate these alternative flood damage reduction measures is cost-effectiveness. Two measurements of efficiency are used to evaluate the cost-effectiveness of the alternatives: total project costs and costs per structure protected. Table 5 displays the cost-effectiveness of each of the alternatives studied in detail for the Williamson Study area. As shown on the table the resettlement and floodproofing alternative is by far more cost effective in reducing flood damages to Fairview and East Williamson. The floodwall alternative is approximately 3.5 times more costly to implement than the resettlement and floodproofing alternative in providing a similar level of protection to the damaged structures.

Table 5
Cost Effectiveness of Alternatives
(October 1983 Price Level)

Alternatives	Total Cost	Cost per Unit Protected
Floodwalls at Fairview and East Williamson	$33,681,000	$191,400 1/
Non-structural Floodproofing with Relocations at the Following Site Developed for Optimum Capacity.		
Valley View Site (85 units)	$ 9,732,000 2/	$60,100 3/
Buffalo Creek (50 units) and Sycamore Creek (32 units)	$11,884,000 2/	$73,400 3/
Buffalo Creek (50 units) and Lick Creek (30 units)	$12,496,000 2/	$77,100 3/
Buffalo Creek (50 units) and Ballfield Site (30 units)	$13,968,000 2/	$86,200 3/

1/ Based on protection of 176 units.
2/ Cost includes resettlement site construction cost, floodproofing cost, and floodplain acquisition cost.
3/ Based on protection of 162 units.

Based on this analysis, it is apparent that the non-structural alternative is a more cost-effective solution to the flooding problems in the study area than the structural alternative. This comparison addresses concerns expressed by ASA (CW) in memoranda, dated 12 July 1982 and 22 February 1983, to the Director of Civil Works regarding the development of cost-effective, non-structural alternatives to the flooding problems in the Tug Fork Valley.

B. Effectiveness. Each of the alternatives was evaluated for its effectiveness in reducing flood damages based on two factors: level of flood protection provided and the number of units protected by the project.

1. Level of Protection. Section 202 of Public Law 96-367 specified that communities within the Tug Fork Valley shall be protected against the recurrence of the April 1977 flood as a minimum level of protection. ASA (CW) Memoranda of 12 July 1982 and 12 August 1982 reconfirmed the April 1977 flood level as the design flood for the formulation of flood damage reduction measures authorized under Section 202. For the purposes of this report, the April 1977 flood is used as the minimum level of protection to compare the effectiveness of the alternatives and the relative cost efficiency of the alternatives. No overtopping analysis is included for the floodwall alternative since it is not being recommended for approval.

Floodwalls at both Fairview and East Williamson would provide protection to those communities against the recurrence of the April 1977 flood. Interior drainage facilities constructed in accordance with the floodwalls would protect structures from interior flooding during recurrence of the April 1977 flood.

Floodproofing in the Williamson Study Area would be implemented such that floodproofed structures would be protected from flood damages due to the recurrence of the April 1977 flood at that location.

All of the recommended resettlement sites in the Williamson Study Area, described in Section V.B.4., are located above the April 1977 flood level. Therefore, the non-structural (resettlement and floodproofing) alternative would provide a level of protection in accordance with Section 202 requirements and ASA (CW) directives described above.

2. Units Protected. The effectiveness of the structural floodwall alternative in terms of the number of units protected is based upon the total number of units protected by the wall plus the number of units relocated due to the walls construction. The Fairview community contains 76 structures which were effected by the April 1977 flood. Through the wall construction and the mandatory relocation of 17 residential units and 2 non-residential units, the Fairview floodwall would protect all 76 structures. The East Williamson floodwall would protect the entire 100 structures included within the project limits without any relocations due to the project. In total, the two floodwalls would protect 176 structures in the study area providing an effective alternative for reduction of flood damages.

Investigations of the floodplain areas in Fairview and East Williamson indicate that a total of approximately 162 units could be protected by the non-structural (resettlement and floodproofing) alternative. The actual number of units which would be protected would depend upon the decisions made by each individual owner or renter. Table 6 shows the disposition of those participating units under the non-structural program. As shown on the table, only 14 (12 residential, 2 commercial) units have not indicated a willingness to participate in the program for market location reasons or other socio-economic factors.

Table 6
Nonstructural Alternative

Disposition	Units
Total structures damaged by the April 1977 flood	176
Residential	158
Non-residential	18
Residential structures eligible for floodproofing	58
Households projected to participate in program	56
Households not anticipated to participate	2
Residential Structures eligible for evacuation	100
Households projected to participate in program	90
Moving to resettlement site	72
Moving to a site elsewhere	18
Households not anticipated to participate	10

Commercial structures eligible for floodproofing	0
Commercial structures eligible for evacuation	18
Owners projected to participate in program	16
Owners anticipated not to participate	2
Total not anticipated to participate in program	14

C. Completeness. Measures of completeness for each alternative should consider to what degree the alternative addresses all of the identified problems. The floodwall alternative produces a complete solution to the flooding-related problems with but one exception. The exception is the incidence of project-generated environmental impacts at the Fairview Project. This residual problem cannot be completely solved by the project alone. Programs administered and maintained by other agencies would be required to mitigate these impacts. The coordinating agencies would be the U.S. Fish and Wildlife Service and the West Virginia Department of Natural Resources. Mitigation alternatives for project related impacts would have to be developed and coordinated with these two agencies.

The resettlement and floodproofing alternative is formulated to integrate the programs, administration, and maintenance capabilities of other agencies. As a solution to the flooding problems, this alternative is essentially complete. State housing development and local floodplain zoning programs will be the primary contributors in this alternative. The long term operation and maintenance of the evacuated floodplain areas, the resettlement site and the floodproofed structures will be the sole responsibility of the local sponsor and the State housing agency. Corps responsibility will consist of annual inspections to insure compliance with the Local Cooperation Agreement provisions.

D. Acceptability. This criterion is composed of two parameters: social acceptability and environmental suitability.

1. Floodwalls. From a social acceptability viewpoint, the floodwall alternative has considerable merit. Generally speaking, communities in the Tug Fork Valley have not rejected the floodwall alternative as an acceptable solution to their flooding problems. However, from an environmental suitability standpoint the floodwall alternative has serious shortcomings. Table 7 displays the acres of terrestrial and aquatic habitat disturbed by the floodwall projects at Fairview and East Williamson. As the table indicates, approximately 9.2 acres of terrestrial habitat would be destroyed by the floodwalls construction and approximately 1.2 acres of aquatic habitat would be disturbed during that construction. These adverse environmental impacts produce residual problems of the floodwall alternative reducing its acceptability to environmental concerns.

Table 7
Acres of Habitat Disturbed by Floodwalls

Habitats	Acres Disturbed by Project	
	Fairview	East Williamson
Terrestrial	9 acres	0.2 acres
Aquatic	1.2 acres	0 acres

2. Non-Structural Plan. The results of a recent housing survey within the Williamson Area indicated that 90 percent of the persons effected by the April 1977 and May 1984 flood would relocate out of the floodplain if affordable resettlement housing were available nearby. This response reinforced local attitudes expressed during a series of 14 workshop meetings held within the Tug Fork Valley prior to preparation of the General Plan. As shown in Figure 3, the floodproofing alternative is acceptable to the residents in the Valley. The acceptability of floodplain relocations and resettlement has been reinforced by the high occupancy rates of at least three state-financed, multi-family housing developments (two in Kentucky, one in West Virginia) constructed in flood-free sites in the Tug Fork Valley since the April 1977 flood.

From an environmental standpoint, the resettlement and floodproofing alternative provides positive net benefits to the environment in the Williamson area. All of the resettlement sites described have been disturbed by past and present uses and would be stabilized as a long term residential development. The floodplain areas that would be evacuated under the project would be allowed to revert to a natural river corridor with developments restricted to floodplain compatible uses. Overall this alternative is environmentally suitable in all respects.

E. Risk and Uncertainty. The survivability and viability of the Tug Fork Valley communities are directly associated with the continuation of a healthy coal production industry. Considering the numerous effects that alternative energy sources, foreign and domestic competition, and unstable labor forces have on the Valley's economy, any long-term Federal project will have uncertainties built into the planning and implementation phases. Both of the alternatives considered are affected by this uncertainty.

Under the floodwall alternative, the actual construction of the wall would be certain and would guarantee 100 percent participation by the community in the flood protection project.

The uncertainties associated with the non-structural alternative concern the program participation rate. The participation rates set forth in this report were developed through the use of surveys and data supplied by state and local agencies regarding the acceptability of the alternative. Local initiatives producing scattered relocations and poorly engineered floodproofing indicate that an effective participate rate is attainable.

F. Selection of the Alternative. Of the various alternatives considered as potential solutions in the flooding problems in the Williamson Area, only two alternatives were evaluated in detail as potential solutions: Structural floodwalls and non-structural floodproofing and floodplain evacuations. Table 8 compares the two alternatives according to the evaluation criteria. The table data indicates that both alternatives are effective in reducing flood damages to the majority of effected units.

The table shows that the floodproofing and resettlement alternative is much more efficient in reducing flood damages than floodwalls. Total costs and per unit costs are at least 3.5 times greater under the floodwall alternative.

Both alternatives were found to be acceptable to the local population as potential solutions to their flooding problems. However while the floodproofing and resettlement alternative produces net positive environmental impacts, the floodwall alternative produces adverse environmental impacts requiring some form of mitigation/compensation.

The floodwall alternative assures nearly 100 percent participation and certain implementation of the project once approved. The non-structural alternative is sensitive to uncertainties based upon the voluntary participation nature of the program. Data displayed in this report and the presence of local nonstructural initiatives indicate that participation in the program would be high.

In summary, the evaluation shows that the floodproofing and resettlement alternative provides a level of protection in accordance with ASA (CW) and Congressional directives, is effective in reducing damages, is more cost efficient than floodwalls, has fewer residual impacts, is socially acceptable and provides net positive environmental impacts. Uncertainties associated with the voluntary nature of the program are negligible. Clearly, the nonstructural alternative is the best solution to the recurring flood damages in Fairview and East Williamson.

VII. SELECTED PLAN

The selected plan consists of two separate actions: floodproofing of eligible structures to elevations above the April 1977 level and relocation and resettlement to flood free sites of those households for which floodproofing is not feasible.

Table 8
Alternatives Evaluation

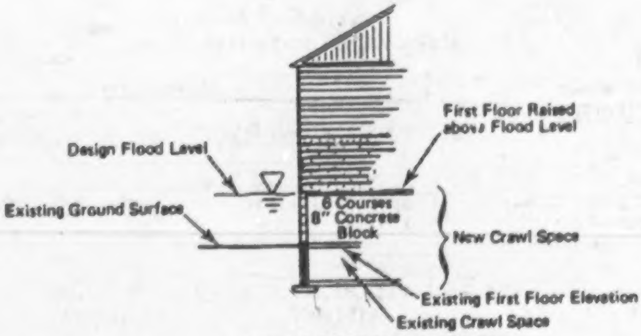
Evaluation Criteria	Alternatives	
	Floodwalls	Floodproofing/ Resettlement
Effectiveness		
- Level of protection	April 1977 level	April 1977 level
- Units protected	176	162
Efficiency		
- Total Cost	$33,681,000	$ 9,732,000
- Unit Cost	$191,000	$60,100 1/
Completeness		
- Residuals	Environmental	14 Units 2/
- Other programs required	Yes	Yes
Acceptability		
- Social	Acceptable	Acceptable
- Environmental	Adverse Impacts	Net Positive Impact
Uncertainty		
- Participation Rate	100 Percent	90± Percent

1/ Unit cost includes floodplain acquisition, floodproofing costs, resettlement site costs and relocation payments.

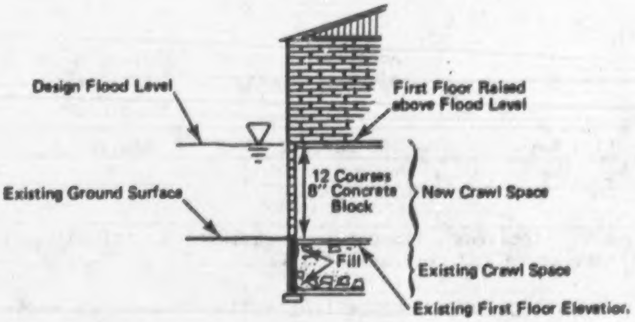
2/ Not participating due to compelling socio-economic or market location decisions by owner.

A. Floodproofing. The area where floodproofing is considered implementable in the communities of Fairview and East Williamson is shown on Exhibit 5. The zone of floodproofing shown on the exhibit indicates the areas where the maximum 12 feet of floodproofing by raising-in-place will provide 1 foot of freeboard above the April 1977 flood level. There are approximately 38 structures located in this zone that could be protected by raising them up to 8 feet. An additional 20 structures may be floodproofable. These structures are located where flood depths were between 8 feet and 11 feet deep in the April 1977 flood. Each of these 20 structures will be evaluated on a case by case basis to assess their capability to be floodproofed up to the maximum 12 feet.

The following graphics illustrate the types of structures located in the floodproofing zone and the methods of floodproofing applicable to each structure type. As shown in the following figures 4, 5, 6, and 7 the floodproofing options are flexible and individually tailored to each structure involved. Structures which are raised in place will be furnished with new accesses to elevated floors and flood prone electrical and heating equipment will be relocated to the elevated floors. Both wood frame and masonry structures will be floodproofed within the eligible zone. Restrictions on the use of supporting structure basements and crawl spaces will be contained in the required floodproofing agreement executed by the structure owner, the implementing agency and the local floodplain enforcement agency.


First Floor Raised above Flood Level
Design Flood Level
Existing Ground Surface
6 Courses 8" Concrete Block
New Crawl Space
Existing First Floor Elevation
Existing Crawl Space

RAISING FIRST FLOOR 4 FEET


Design Flood Level
First Floor Raised above Flood Level
12 Courses 8" Concrete Block
Existing Ground Surface
New Crawl Space
Fill
Existing Crawl Space
Existing First Floor Elevation

RAISING FIRST FLOOR 8 FEET

Figure 7
Applicable Floodproofing Method

Implementation of the floodproofing measures will be accomplished through a partnership of the Corps of Engineers and the West Virginia Housing Development Fund. Initial determinations of structure zone eligibility, structural stability, and the applicable floodproofing method to be used will be undertaken by the Corps. Actual construction of the floodproofing measures will be supervised by the West Virginia Housing Development Fund (WVHDF) utilizing Federal Section 202 program funds. Inspection and approval of floodproofing construction will be undertaken jointly by the Corps and the WVHDF to insure full compliance with the program requirements. This shared responsibility for the floodproofing implementation will take advantage of the WVHDF's many years of state housing rehabilitation experience and available funding for structure rehabilitation measures. The completed structure would be safe, free of flooding, and rehabilitated under State housing codes. Enforcement of the restrictions placed on the use of subfloors and basements to eliminate future flood damages will be the responsibility of the local sponsor (Mingo County) under the terms of the Local Cooperation Agreement and the National Flood Insurance Program (City of Williamson).

Floodproofing costs range from $12,000 for 2 feet of rise to $18,000 for 8 feet of rise. Floodproofing above 8 feet increases the basic cost up to $38,000 for 12 feet of rise. Based upon the distribution of units to be floodproofed, the mean cost for floodproofing in the Study Area is $20,000 per structure. The total costs for floodproofing the 56 eligible structures is $1,120,000.

B. Floodplain Evacuations and Resettlement. The floodplain area where structure relocations would be applicable in Fairview and East Williamson is shown on Exhibit 6. Approximately 100 structures will be eligible for relocations from that flood hazard zone. Owners of eligible residential structures would be offered the option to relocate to the proposed resettlement site or a site of their choice. Relocation benefits will be provided to those participating in the program in accordance with the last resort housing provisions of P.L. 91-646. Opportunities for single-family home ownership or multi-family unit rental will be provided at the resettlement site.

Based upon the results of the housing survey, about 90 percent of those residents eligible for relocation would participate in the program (about 90 residential units). Of that group of potential participants, it is anticipated about 80 percent would ultimately relocate to a housing relocation site developed under this program (about 72 residential units). The remaining 18 units indicated a preference for moving out of the region or to an alternate site in the county. The 72 residential units would be targeted for one of the identified housing sites. The most economical and socially acceptable site available which contains sufficient capacity to accommodate these units is the Valley View Site (see Table 4).

Unit types for relocatees would be based upon the preferences for new units indicated by floodplain residents in the housing survey. About 64 percent of the households preferred a single-family, detached residence, while 36 percent favored a multi-family unit (duplex or townhouse). The high percentage of multi-family units preferred reflects the mean age of the residents (52 years) and the existing number of renters in East Williamson. This unit mix would require platting the Valley View Site to initially accommodate 46 single-family homes and 26 multi-family units (16 duplex units and 10 townhouse units). Based on preliminary design layouts, the Valley View Site could accommodate a total of 85 units according to development standards established by HUD and FHMA. Since the recent housing survey cannot be considered complete for determining the actual percentage of relocatees who would ultimately move to the Valley View Site it is anticipated that a percentage of the remaining 28 households eligible for relocations will avail themselves of the homes at the Valley View Site considering the lack of flood-free alternative sites in the area. For this reason, the site would be developed for its optimum capacity of 85 units. Exhibit No. 7 shows a schematic layout of the proposed Valley View Site. Total site construction costs for this site are $2,453,000.

Commercial relocations would be implemented under P.L. 91-646. As stated earlier, there are available tracts of land and vacant structures located within the Williamson CBD and West Williamson which could accommodate these businesses. Relocations advisory assistance on these tracts would be available from Corps' Real Estate elements. Exhibit No. 8 shows the location of these available relocation areas for commercial uses. Due to the market considerations inherent in commercial relocations and the individual decisions required of each business owner to locate the best new location, no final determination can be made in this report as to the eventual location of each of the 16 businesses which indicated that they would participate in the program.

Acquisition of the resettlement site and floodplain properties and construction of the residential resettlement site would be accomplished by the Corps under the authority of Section 202 of P.L. 96-367. The resettlement site would be platted by the Corps and conveyed by deed to the WVHDF upon completion of the site development phase. Management of the housing construction and resident occupation of those units would be the responsibility of the WVHDF. Homes and lots would be deeded by the WVHDF to eligible floodplain relocatees. Multi-family rental units will be produced and operated by the WVHDF. Payment for lots and homes in the Valley View site would be made by relocatees from their floodplain property acquisition payments and relocation benefits under P.L. 91-646. Arrangements for long-term Federally insured mortgage financing of any residual costs of new residential structures and new home construction would be coordinated by the WVHDF. The long term operation and maintenance of the site facilities (streets, water, sewer, etc.) and the provision of essential public services (fire, police, garbage, etc) would be the responsibility of the City of Williamson through annexation of the site into the city (see letter of intent, Exhibit No. 9). Corps involvement with the resettlement program will be limited to annual inspections of the relocation site and the evacuated floodplain area to insure compliance with the local Cooperation Agreement and the objectives of the plan.

C. Disposition and Use of Evacuated Floodplain Areas. Those tracts of land located in Fairview and East Williamson which are evacuated in the relocation program will be deeded to the local sponsor for operation and maintenance. As acquisition of floodplain land proceeds and as soon as is practical after completed acquisition of various such tracts of land and clearing, the parcels will be conveyed to the local sponsor in accordance with the executed Local Cooperation Agreement. The conveyances will contain any restrictions which may be considered necessary to ensure that the objectives of the program are achieved. The authority for the conveyance of housing relocation sites and for the conveyances of the floodplain land will be Section 202, P.L. 96-367. The deeds will be prepared citing such authority and will be executed by the Secretary of the Army. Portions of the evacuated land bordering the Tug Fork River will be set aside for use as mitigation lands to offset wildlife habitat losses due to construction activities at the approved Williamson Area Floodwall projects. Other areas will be considered for recreation activities, farming, gardening, and other uses compatible with floodplain restrictions. These uses will be coordinated between the Corps, the State environmental agencies and the local sponsor to insure the wise use of the evacuated floodplain and to assure satisfaction of the non-structural program objectives.

D. Flood Warning and Emergency Evacuation System. During the April 1977 flood in the Williamson Area, advance warning of the flood's magnitude and potential impacts was not available to a great many residents and businesses in sufficient time to prevent flood damages. Many homes and businesses were abandoned during the flood with damageable property not relocated to other locations or safer elevations within the structure. Generally, the evacuation was haphazard and disorganized. Fortunately, no lives were lost during the April 1977 flood.

Although cognizant of the experiences learned in the April 1977 flood concerning warning times, flood forecasting and orderly evacuation, many damages suffered in the May 1984 flood were due to inadequate warning systems and disorganized evacuation procedures. The development of a well coordinated and organized system of warning devices, emergency procedures, and evacuation routes and relocation areas could have provided an orderly response to the flood emergencies of 1977 and 1984. Results from the housing survey indicated that 85 percent of the businesses located in the Study Area could have significantly reduced damages by relocating damageable contents had adequate flood warnings been available to them.

The development of a Flood Warning and Emergency Evacuation System which considers the capabilities of the National Weather Service; the Corps of Engineers; Federal, State and local emergency services agencies; rainfall recording systems; stream data gauges; evacuation routes; temporary relocation shelters; coordinated police, fire and public works departments; and the integration of the entire system, would provide an efficient and effective response to future flood emergencies. In view of the development of the approved Williamson Area floodwall projects and the proposed floodproofing program in this report, the development and implementation of such a plan would provide ample warning times for required gate closure operations and evacuation of residents from floodproofed structures. The non-Federal sponsor (Mingo County) is required under the provisions of the Local Cooperation Agreement to operate and maintain an effective flood warning and emergency evacuation system as part of the project obligations. The local sponsor is in the process of developing such a system in coordination with the National Weather Service, the Corps, and the state Emergency Management Agencies.

E. Recommended Actions to Mitigate Williamson Area Project Impacts. As discussed in Section I.B. of this report, the approved Williamson Area Floodwall projects will provide a high level of protection to the dense concentrations of commercial and residential structures in the Williamson CBD and West

Williamson. Implementation of approved floodwall projects and associated snagging and clearing operations will generate some adverse impacts to the project area terrestrial and aquatic environmental resources.

An analysis of the project's wall alignments and construction methods determined that a number of acres of both aquatic and terrestrial wildlife habitat would be lost. Table 9 displays the total number of acres of habitat destroyed by the project elements. The majority of the adverse impacts associated with the construction of the approved projects involves terrestrial habitat resources. The West Williamson floodwall and the snagging and clearing operations are responsible for 92 percent of the total acres of habitat disturbed. All of the aquatic impacts are associated with the West Williamson project due to a channel modification for construction of the floodwall.

Table 9
Acres of West Virginia Habitat Lost Due to
Project Construction

Project Element	Terrestrial Acres	Aquatic Acres
Williamson CBD Floodwall	5.2	0
West Williamson Floodwall	17.2	3.3
Snagging & Clearing [1]	45.0	0
Total Acres Disturbed	67.4	3.3

[1] Total acres of terrestrial habitat disturbed in West Virginia.

An in-depth study of the project related impacts generated by the approved floodwalls in the Williamson Area was accomplish in the formulation of the portion of the General Plan concerning the Tug Fork Valley. The following discussion is a brief summary of that study.

Based on the types of environmental impacts generated by the proposed Plan F-1 projects, a number of alternative mitigation/compensation measures were formulated. Those measures included: on-site environmental design techniques, acquisition and management of separable mitigation lands, compensation payments for intensifying management of State operated land and water resources, expansion of existing fish hatcheries and intensive managment of evacuated floodplain lands for wildlife resources. Due to the relatively minor impacts on the terrestrial and aquatic habitats in the Williamson area from project construction, it was determined through coordination with both Federal and State environmental and fish and wildlife management agencies that most of the impacts could be mitigated or compensated for in the Williamson Area.

The development of mitigation measures for floodwall-generated impacts in the Williamson area would consist of two parts: on-site mitigation of aquatic losses through environmental design and construction techniques at the floodwall projects and the management of portions of the evacuated floodplain areas in Fairview and East Williamson for wildlife resources. On-site mitigation techniques for aquatic species would require placement of instream structures such as stone slope protection and boulders in the channel modification area at West Williamson and the preservation of streamside canopy vegetation where possible during construction. Preservation of river access for fishermen and the general public would satisfy the aquatic mitigation requirements.

The requirements for terrestrial wildlife mitigation would concentrate on management of approximately 50 acres of evacuated floodplain directed by the State under license agreements with the local sponsor. This intensive use of the evacuated floodplain lands as wildlife habitat would result in the effective and cost efficient integration of the approved structural and proposed non-structural projects in the Williamson area. Alternatives to the intensive management of the evacuated floodplain areas would include the purchase of separable lands for mitigation and intensification of management on State-operated lands. The necessity of separate Congressional authority to purchase separable lands for mitigation purposes and the real estate acquisition costs to purchase comparable occupied river corridor lands for wildlife habitat indicates the cost effectiveness of wildlife management on evacuated floodplain lands under the non-structural program.

VIII. PROJECT IMPLEMENTATION

A. Responsible Agencies and Future Operation and Maintenance. The project elements recommended for implementation in this specific project report would require the cooperation and coordination of several Federal, State, and local agencies to be successful. Table 10 lists the participating agencies and the responsibilities each would undertake during the planning, design, construction and future operation and maintenance of the project features.

Table 10
Agency Responsibilities

Project Elements	Corps	WVHDF	County/City	State DNR
Eligibility determination of floodplain structures	X			
Floodplain property/ resettlement site acquisition	X			
Resettlement site design and construction	X	X		
Floodproofing structures		X		
Relocation housing construction		X		
Restoration of floodplain site	X			X
Administration and O&M of resettlement site			X	
Enforcement of floodplain restrictions on evacuated lands and floodproofed structures			X	

Responsibilities assumed by the WVHDF would be through contractual agreements with the Corps of Engineers. Administration of the floodplain lands would be facilitated by the Local Cooperation Agreement with the local sponsor. Management of the evacuated floodplain areas for wildlife mitigation would be directed by the State Department of Natural Resources under subagreements from the local sponsor. Exhibits 9, 10, and 11 are letters from the non-Federal agencies indicating their intent to cooperate in the proposed project implementation.

B. Project Funding Schedule. Table 11 shows the estimated construction and acquisition costs for the proposed non-structural program. This total cost conforms with the expenditures displayed in the PB-2A dated 15 September 1984 for nonstructural projects in the Levisa and Tug Forks of the Big Sandy River and Upper Cumberland River, WV, VA & KY. Due to refinements in this plan the allocation of funding has been modified to conform with the sequence of project elements listed.

Table 11
Non-Structural Program Costs

Feature	Cost ($1,000's)
1) Floodproofing (56 units)	$ 1,120.0
2) Relocation Site (Valley View)	
- Acquisition	$ 428.0
- Site development (85 units) 1/	$ 2,025.0
3) Floodplain Acquisition 2/	
- Residential tracts (72) site relocatees	$ 3,600.0
- Residential tracts (18) evacuees 3/	$ 900.0
- Commercial properties (16)	$ 1,459.0
4) Demolitions and restoration of Floodplain tracts.	$ 200.0
Project total	$ 9,732.0

1/ Development of site to optimum capacity.

2/ Includes relocation payments under P.L. 91-646.

3/ Evacuees opting to relocate or resettle to areas other than the relocation site (it is assumed that a substantial number of these households will be forced to use the Valley View site due to the lack of alternate sites in the valley).

Table 12 shows the proposed sequence of project implementation and the approximate levels of expenditure for each phase. The initiation of project implementation is based on expeditious approval of this report. The estimated total project cost of $9,732.00 would be expended over three fiscal years, as shown in the table below.

Table 12
Project Funding Schedule
($1,000's)

Project Elements	FY 85	FY 86	FY 87
Engineering and Design of Resettlement Site & Floodproofing	267.0	70.0	0
Floodproofing	60.0	540.0	520.0
Acquisition of Resettlement Site	0	428.0	
Construct Resettlement Site	0	0	1,688.0
Acquire Floodplain Real Estate and relocations into resettlement site.	100.0	817.0	5,042.0
Demolitions and Restoration	0	100.0	100.0
Total expenditures by Fiscal Year	427.0	1,955.0	7,350.0

IX. REPORT CONCLUSIONS

This Specific Project Report describes the project elements contained in a non-structural program of floodproofing and floodplain relocations for the Williamson, WV, areas not protected by approved floodwall projects. The non-structural measures were found to be effective in reducing flood damages, cost-effective in relation to other alternatives considered, and both socially acceptable and environmentally suitable. The recommended project has been coordinated with the State of West Virginia and the local sponsor of the project, satisfies the legislative requirements of both Section 202 and P.L. 98-332, and addresses the concerns expressed by ASA (CW) in the implementation of Section 202 program elements.

It is concluded that the non-structural project described herein should be recommended for implementation and that funds for the project authorized in P.L. 98-332 be approved for expenditure.

LETTER FROM RONALD J. RUMORA, COMMISSIONER, MINGO COUNTY, WV

January 10, 1985

Colonel Robert B. Wilson
Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701-2070

Dear Colonel Wilson:

The Mingo County Commission of West Virginia, has been involved with the planning of the proposed non-structural components of Plan F-1 contained in the General Plan for Section 202 since the April 1977 flood. The Huntington District has updated the County Commission at frequent intervals concerning this program and we have contributed whatever information and public concerns were pertinent to the issues.

We have reviewed the District's proposed plans for floodproofing and permanent floodplain evacuations in the Fairview and East Williamson sections of the City of Williamson. Also, we have reviewed the District's proposed housing relocation development at the Valley View site for participants in the program who choose to leave the floodplain and remain in the Williamson area.

The Mingo County Commission fully supports the District's proposed non-structural plan as described in the report being submitted to the Assistant Secretary of the Army for approval. Generally the District's non-structural program is in accord with the recently enacted floodplain ordinances and is responsive to the need of the residents of Fairview and East Williamson.

We appreciate the opportunity to express our support and concern for this much needed program. In conjunction with construction of the approved floodwalls in the Williamson Area, the floodproofing and relocations plan will provide all of the citizens of our county with protection against future floods like the April 1977 flood.

Sincerely,

RONALD J. RUMORA
Mingo County Commission

LETTER FROM JOE W. HATFIELD, EXECUTIVE DIRECTOR, WEST VIRGINIA HOUSING DEVELOPMENT FUND

January 17, 1985

Colonel Robert B. Wilson
Huntington District
U. S. Army Corps of Engineers
502 Eighth Street
Huntington, WV 25701-2070

Dear Colonel Wilson:

The West Virginia Housing Development Fund has worked with the Huntington District to coordinate the various elements of the proposed non-structural program in the Tug Fork Valley since the initiation of studies for the Section 202 plan. We have been frequently updated by the Huntington District concerning this project, and on two occasions, have discussed the particulars of the program with the Assistant Secretary of the Army in the Williamson area.

We have reviewed the Huntington District's non-structural program for the Williamson area including floodproofing and permanent evacuation of the floodplain in the Fairview and East Williamson communities. We are now reviewing the District's plans for the Valley View housing relocation site to provide decent, safe and sanitary housing opportunities for floodplain owners. We fully support the District's non-structural program for this area, and intend to participate in its implementation. The Housing Development Fund is capable of administering both the construction of new homes at the proposed housing site, and the floodproofing of eligible structures in the floodplain. Where necessary, the Housing Development Fund would assist owners to secure the required long-term mortgage financing for relocation, and would aid floodplain owners in obtaining rehabilitation funds to upgrade floodproofed homes to decent, safe and sanitary standards.

The Housing Development Fund has many years of experience in programs featuring housing relocations, new home construction, floodproofing, and housing rehabilitation in the state of West Virginia. We welcome the opportunity to cooperate with the Huntington District in the implementation of this proposed program in the Tug Fork Valley.

Sincerely,

WEST VIRGINIA HOUSING DEVELOPMENT FUND

Joe W. Hatfield
Executive Director

Letter From Sam Kapourales, Mayor, Williamson, WV

January 17, 1985

Colonel Robert B. Wilson
Huntington District
U.S.Army Corps of Enginers
502 Eighth Street
Huntington, West Virginia 25701-2070

Dear Colonel Wilson:

The City of Williamson, West Virginia, has been involved with the planning of the proposed non-structural components of Plan F-1 contained in the General Plan for Section 202 since the April 1977 flood. The Huntington District has updated the City government at frequent intervals concerning this program and we have contributed whatever information and public concerns were pertinent to the issues.

We have reviewed the District's proposed plans for floodproofing and permanent floodplain evacuations in the Fairview and East Williamson sections of the City of Williamson. Also, we have reviewed the District's proposed housing relocation development at the Valley View site for participants in the program who choose to leave the floodplain and remain in the Williamson area.

The City of Williamson fully supports the District's proposed non-structural plan as described in the report being submitted to the Assistant Secretary of the Army for approval. The City also is prepared to provide the necessary operation and maintenance responsibilities for the Valley View housing site. Generally the District's non-structural program is in accord with our recently enacted floodplain ordinances and is responsive to the need of the residents of Fairview and East Williamson.

We appreciate the opportunity to express our support and concern for this much needed program provided this site will be annexed in the City of Williamson. In conjunction with construction of the approved floodwalls in the Williamson Area, the floodprofing and relocations plan will provide all of the citizens of our City with protection against future floods like the April 1977 flood.

This letter should be considered as an expression of our intent to cooperate in the implementation of the proposed non-structural plan features.

Sincerely,

Sam Kapourale

Sam Kapourales
Mayor,City of Williamson

CONSTRUCTION CAPABILITY

Senator BYRD. Are you confident, Mr. Dawson, that the fiscal year 1986 budget request will fund the full construction capability for the Tug Fork project?

Mr. DAWSON. If I might defer again to Dr. Steinberg. I think so.

Bory, would you confirm that?

Dr. STEINBERG. We have adequate funds for both the structural and nonstructural elements.

GALLIPOLIS LOCKS AND DAM REPLACEMENT, OH AND WV

Senator BYRD. My next question relates to the Gallipolis locks and dam. Would you describe what is the full fiscal year 1986 construction plan, what $4.5 million would accomplish?

Dr. STEINBERG. With $4.5 million, which includes the non-Federal share, we would have sufficient funds to initiate land acquisition and cultural resources, as well as proceed with the design.

Senator BYRD. Is there any clear division of work to be funded from the Treasury and activities on the other hand to be funded from the trust fund? I believe that from the Treasury there would be $1.35 million and the balance from the Inland Waterway Trust Fund amounting to $3.15 million. So is there any clear division of work to be funded from the one on the one hand and the other on the other?

Dr. STEINBERG. There really isn't any division. However, obviously, with only $1.3 million, we would not be able to start the land acquisition.

Senator BYRD. So, what would not be available then that otherwise might be available with the full $4.5 million? What would not be available with only the $1.35 million?

Dr. STEINBERG. Funds to initiate land acquisition as well as further design on later elements of construction, sir.

Senator BYRD. Are you saying you wouldn't be able to go forward at all if you only received the $1.35 million and you didn't get authorization for the other?

Dr. STEINBERG. Well, in the event that only $1.35 million were made available and authorization of the project does not take place, the land acquisition would not begin.

Senator BYRD. What would begin?

Dr. STEINBERG. We would continue the design work that is presently underway that was provided for in the fiscal year 1985 appropriations bill.

Senator BYRD. What kind of delay would be confronting us if only the $1.35 million were available this year?

Dr. STEINBERG. It would be a year.

Senator BYRD. A year?

Dr. STEINBERG. Yes, sir; a year if the project were not authorized and if only $1.35 million were appropriated.

Senator BYRD. What do you anticipate would be lost in terms of benefit, project benefits, over that period?

In terms of dollars, can you calculate what would be lost in benefits?

Dr. STEINBERG. Well, the total average annual benefits are about $173 million. However, in reality, those benefits would not be lost but would only be delayed, as would the costs.

Senator BYRD. How much did you say over a year?

Dr. STEINBERG. I believe the average annual benefits, considering the benefit-cost ratio of 11.3 to 1, are about $173 million.

Senator BYRD. The benefit-cost ratio I thought was 12 to 1.

Dr. STEINBERG. Well, pretty close, sir.

Senator BYRD. So in order to save $3 million-plus in 1986 appropriations, we would delay up to $173 million in benefits?

Dr. STEINBERG. Yes, sir.

AUTHORIZATION OF THE GALLIPOLIS PROJECT

Senator BYRD. Last year the statement of the managers accompanying the urgent supplemental appropriations bill included language providing limited authorization for the Corps of Engineers to proceed with plans and specifications for the Gallipolis locks and dam replacement project. That language was included to minimize any delays in lost benefits that might result pending the completion of a full-fledged water projects bill.

We are faced with somewhat of a similar situation this year, as I see it. The Corps would need at least a limited authorization before it can proceed, as you say, with real estate acquisition and a number of other activities outlined in the budget justification. Is that correct?

Dr. STEINBERG. Sir, the full $4.5 million is required to maintain a schedule, subject to the authorization. We have allocated $1.7 million in the current fiscal year to maintain the schedule for plans and specifications.

Senator BYRD. Let me ask you this: Do you support a limited authorization again this year to avoid further delays?

Dr. STEINBERG. We hadn't looked at it that way, sir. The bill which has come to the Congress today calls for full authorization, subject to the user fee legislation, which Mr. Dawson has described. So subject to enactment of user fee legislation, we are hopeful to go to full authorization rather than limited.

Senator BYRD. If you don't get the user fee legislation, then where do we stand?

Mr. DAWSON. Senator Byrd, that is our proposal, that we would support Gallipolis in the budget only if acceptable cost-sharing legislation is adopted.

Senator BYRD. Only if it is adopted?

Mr. DAWSON. Yes, sir.

Senator BYRD. Even though as has been indicated for the record the benefits that would be foregone would amount to up to $173 million annually. Is that accurate?

Dr. STEINBERG. Those benefits would be delayed.

Mr. DAWSON. Yes, sir. I think using that logic, we could quickly double our budget. I think the question is, How do we accomplish those benefits in a way that we can get all the way through the system.

Senator BYRD. Is that the only remaining facility on the Ohio River which has not been modernized?

Mr. DAWSON. I don't believe so.

Dr. STEINBERG. At the upper end. At locks 52 and 53, we are still operating with the old lock plus a temporary lock. The upper three near Pittsburgh are being rehabilitated, but we have not enlarged them.

General HEIBERG. But those five Dr. Steinberg just mentioned, Senator Byrd, are not as critical as Gallipolis. Clearly the bottleneck is in the middle, at Gallipolis.

RECENT ACCIDENTS AT GALLIPOLIS LOCKS AND DAM

Senator BYRD. What was the cost of repairing that facility as a result of the accident that occurred last year?

General WALL. Sir, we will have to furnish that for the record. We don't have that information with us.

Senator BYRD. You will remember one of the barges, I think, rammed a gate and damaged the gate. Fortunately, there was a spare gate on the site, but they had difficulty getting the spare gate in. I think it was damaged before it was in place. There was a considerable backup over a length of some days.

Could you indicate for the record the facts with respect to the amount of damage done, the length of the delay, and what you would contemplate as being an estimate of lost benefits which resulted from those delays? Would you do that, please?

General WALL. Yes, sir, we will provide that, along with the repair costs.

[The information follows:]

REPAIR AND DELAY COST AT GALLIPOLIS

There were two accidents last year in April. The total estimated costs for repair of the damages associated with the first and second incidents are $350,000 and $300,000, respectively. To date, about $100,000 has been expended to place the spare miter gates into service. The remaining cost will be incurred when the repaired miter gates are put back in service and the spare gates are repaired.

During the installation of the spare miter gates after the first accident, towboats were cumulatively delayed 5,543 hours. The cost of this delay was about $1,940,000, based on average hourly operating costs. The cost of the delay after the second accident was about $12,000. At this time we cannot estimate the cost of the additional closure of approximately 10 days which will be necessary when the original miter gates are repaired and installed at the locks. In addition, information is not available concerning revenue losses, diverted shipment costs, and costs from delay in shipments.

SUPPORT FOR BONNEVILLE AND GALLIPOLIS PROJECTS

Senator BYRD. Mr. Chairman, I certainly support your desire to have the Bonneville project go forward also. We have worked together on these two projects and gotten them in bills twice this past Senate. Both times I think we ran into some problems in the House. But those problems accrued from the resistance on the part of the administration, I think, in considerable measure. So I thank you for your support of these two projects. I want to continue to do what I can to be helpful.

I also thank you, Mr. Secretary, and General Heiberg, General Wall. I hope we can go forward with both of these projects.

FUNDING CAPABILITY

Suppose this committee puts in the $4.5 million. If you assume we were able to do that, then where would that put you with reference to Gallipolis?

Mr. DAWSON. I think we would have to supply for the record exactly what might be done with that money.

General WALL. We could go ahead with real estate. That is the part we could do then.

[The information follows:]

PROJECT CAPABILITY

The amount of $4.5 million would be applied as follows:

Initiate land acquisition	$1,380,000
Initiate cultural resources	200,000
Engineering and design	2,650,000
Supervision and administration	270,000
Total	4,500,000

COMPLETION SCHEDULE

Senator BYRD. What is the target date for this project, the completion?

General WALL. After the authorization, we could get into it. So we really don't have a target date right now, sir.

Senator BYRD. Included in our efforts I believe was the authorization also, was it not?

Chairman HATFIELD. Yes, sir.

Senator BYRD. Don't you view this Gallipolis facility as one of the very key facilities in this country that should go forward because there is a tremendous bottleneck there and we saw it when the accident occurred? If we are going to realize the benefits from the earlier modernization of other facilities on the Ohio River, this bottleneck has to be removed.

General WALL. Certainly, it is one of the top two, sir. [Laughter.]

Senator BYRD. That is a very diplomatic answer.

Chairman HATFIELD. We need you in the State Department, General Wall. [Laughter.]

Senator BYRD. I want to say a good word, too, for the Secretary there. I think possibly, Mr. Chairman, you put your finger on the trouble spot, somewhere else downtown maybe, rather than in the Secretary's office.

Thank you very much.

Chairman **Hatfield**. Thank you, Senator Byrd. I appreciate your continued support of these important projects. It has been one of the delights of my Senate career to work with you on these items of mutual interests that we have.

Senator Burdick?

Senator **Burdick**. Thank you, Mr. Chairman.

RED RIVER OF THE NORTH, ND

SECTION 22 FUNDING

General Heiberg, I am sure you are aware of the Red River basin in the North—this is the other Red River.

General **Heiberg**. Yes, sir. [Laughter.]

Senator **Burdick** [continuing]. Is plagued by flooding problems. I am told that the St. Paul District of the Corps is now working with the State of North Dakota to establish a technical resource service for the Red River basin using section 22 funding. The service has helped coordinate floodplain management planning for providing the State and local interests the full range of technical services planning assistance.

As you know, the Omaha District and the St. Paul District both have jurisdiction in North Dakota. This arrangement normally works well, except in the case of section 22 funding.

Their problem is that the Red River basin which receives the bulk of North Dakota section 22 funding is located in the St. Paul District. Yet, the Omaha District is responsible for procuring the section 22 funds for North Dakota.

Because of this confusing administrative situation, the State water commission feels that North Dakota's interests would be better served if the funding of section 22 is transferred from Omaha to St. Paul. It seems logical to consolidate the responsibility. Would you be able to support such a transfer?

General **Heiberg**. Sir, I will be happy to look at it. That particular proposal hasn't come to me. But in general, I am very sympathetic to looking at logical ways to organize so we can provide, particularly at the State level, one voice where we can logically do that.

As you know, sir, we do organize and there is a logic to it on a river basin basis. That gives us a great tool, particularly when it comes to our planning. However, I will take a look at that with General Wall and the two division engineers. You will be talking to them, I imagine, in the weeks ahead, but I will also.

Senator **Burdick**. If something comes of this, will you let me know?

General **Heiberg**. Yes, sir. I owe you an answer. I have a monkey, as we say, sir. I will come back to you on that.

LAKE OAHE—BISMARK, ND, AREA STUDIES

Senator **Burdick**. As you know, I have been following the Corps activities with regard to the Missouri River flooding problems around Bismarck, ND. My understanding is you have focused your studies on six alternatives: Bank stabilization, channel cutoffs, dredging, levees, mainstem operations, and land acquisition. With the exception of the levee study, I was informed your evaluation of the other alternatives was to be completed in January. Can you give me a status report on your evaluation of these alternatives?

What is the timetable for your completion of the study? When might we expect a recommendation?

I am sure you recall the residential property value south of Bismarck fell dramatically last year after the Corps announced it might acquire the property for flood control purposes. Has the Corps made that evaluation? If you can't answer that now, can you supply the answer?

General WALL. I can answer right now, with your permission, that the initial screening will be in March 1985, so in the next month we will look at that. We will get a better idea from the division engineer and get back to you with other parts of that.

Senator BURDICK. In March?

General WALL. We will screen it in March. We will have them to look at and be able to determine which one of the six alternatives is best.

Senator BURDICK. Pretty good service.

General WALL. Yes, sir.

LAKE DARLING, ND

Senator BURDICK. I have a final question. Can you give me a status report on the Lake Darling project? I note that the Corps budget includes $3.4 million in construction funds for the project, which I assume is for the Velva feature. What is the timetable for the completion of the Velva feature and what is the Corps intent for funding the overall project?

General WALL. You are correct, sir, we are moving out with the Velva feature right now, and our schedule is to complete construction of the Velva feature in December 1986. The fiscal year 1986 budget request also includes funds to complete engineering and design on the Lake Darling feature, after which the project will be considered for construction under the cost sharing and financing policy in effect at that time.

Senator BURDICK. Talking about Lake Darling, you are treating it as a separate item. Isn't it one project?

General WALL. Well, we are working on separable features of the project, but it is one project in its total effect.

You are quite correct, sir.

Senator BURDICK. That is correct. I want to be sure that distinction is kept.

General WALL. Yes, sir.

Senator BURDICK. That is all. Thank you.

PREPARED STATEMENT FROM SENATOR MATTINGLY

Chairman HATFIELD. Thank you, Senator Burdick.

Secretary Dawson, General Heiberg, General Wall, Dr. Steinberg, we are very grateful for your presence here today.

I do have a statement on behalf of Senator Mattingly, which I want to incorporate in the record at this point.

[The statement follows:]

STATEMENT OF SENATOR MATTINGLY

THANK YOU MR. CHAIRMAN:

THE UNITED STATES CONTINUES TO BE THE WORLD'S LARGEST TRADING NATION. SOME 55 PERCENT OF OUR EXPORTS AND 68 PERCENT OF OUR IMPORTS, BY VALUE, REQUIRE MARITIME SHIPPING. MEASURED BY TONNAGE, SOME 98 PERCENT OF U. S. IMPORT-EXPORT CARGO IS CARRIED BY MARINE TRANSPORT. AS OUR DOMESTIC RECOVERY CONTINUES AND AS THE WORLD ECONOMY IMPROVES, INTERNATIONAL TRADE WILL ALSO EXPERIENCE SUBSTANTIAL GROWTH, OFFERING AMERICAN AGRICULTURE, BUSINESS AND LABOR NEW OPPORTUNITIES TO ENSURE CONTINUED EXPANSION AND TO ACHIEVE NEW HEIGHTS OF PROSPERITY AND NATIONAL SECURITY. HOWEVER, WE ARE ALREADY "BEHIND THE CURVE" IN LAYING THE ESSENTIAL FOUNDATION WHICH WILL BE REQUIRED IN ORDER TO TAKE ADVANTAGE OF NEW OPPORTUNITIES IN EXPANDING INTERNATIONAL TRADE AND WORLD MARKETS.

FOR THE PAST FOUR YEARS I HAVE URGED THE FORMULATION AND ADOPTION OF A UNIFIED, COMPREHENSIVE TRADE POLICY WHICH IS NECESSARY IF WE ARE TO SIEZE UPON THE COMMERCIAL OPPORTUNITIES OF THE COMING DECADES. SUCH AN INTEGRATED POLICY MUST--AMONG MANY OTHER FACTORS--ADDRESS THE CHALLENGE OF TRANSPORTING AMERICAN GOODS AND PRODUCTS TO FOREIGN BUYERS IN A MANNER WHICH DOES NOT IMPAIR COMMERCIAL MARGINS. EVEN WILDLY OPTIMISTIC INCREASES IN U. S. PRODUCTIVITY WILL NOT HELP US RECAPTURE LOST FOREIGN MARKETS AND GAIN NEW ONES IF OUR MERCHANTS ARE SADDLED WITH TRANSPORTATION COSTS WHICH RENDER THEM COMPETITIVELY IMPOTENT!

IT IS THEN VITAL THAT WE RECOGNIZE THE IMPORTANCE OF THE LAND-SEA TRANSPORTATION NETWORK; PORTS PROVIDE LINKAGE BETWEEN MARINE TRANSPORTATION SYSTEMS AND INLAND TRANSPORTATION SUCH AS RAIL, TRUCKING, AND INLAND WATERWAYS. IN ADDITION, OUR PORTS PROVIDE THE INDUSTRIAL BASE NECESSARY TO SUPPORT THE CONSTRUCTION AND REPAIR OF ENTIRE MARINE SHIPPING SYTEMS. DEPENDENT ON THIS LAND-SEA TRANSPORTATION NETWORK IS A LARGE SEGMENT OF U.S. FOREIGN TRADE. MANY AGRICULTURAL EXPORTERS FIND THAT OCEAN TRANSPORT OFFERS THE ONLY ECONOMICALLY EFFICIENT TRANSPORTATION. GRAIN, TOBACCO, COTTON, RICE, FRUITS, VEGETABLES, JUICE, AND MEAT AND MEAT PRODUCTS ARE EXAMPLES OF U.S. AGRICULTURAL EXPORTS THAT LEAVE THE U.S. ALMOST EXCLUSIVELY VIA U.S. PORTS. AS THE WORLD'S NUMBER ONE COAL EXPORTER FOR OVER 30 YEARS, THE UNITED STATES MOVES THE BULK OF ITS COAL EXPORTS THROUGH U.S. PORTS. IN FACT, SINCE 1979, AN ENORMOUS INCREASE IN U.S. COAL EXPORTS HAS STRETCHED THE CAPACITY OF OUR MAJOR COAL LOADING PORTS TO ITS LIMITS. ALSO DEPENDENT ON MARINE TRANSPORTATION ARE MANY OF THE IMPORTS VITAL TO U.S. ECONOMIC WELL-BEING AND SECURITY. SOME 45 PERCENT OF THE U.S.' PETROLEUM SUPPLY COMES FROM ABROAD AND IS HANDLED IN SIGNIFICANT QUANTITIES BY PORTS ALL AROUND THE COUNTRY.

EXPANDING FOREIGN TRADE HAS ALSO EXPANDED THE WATER CARGO FREIGHT MOVING IN THE DOMESTIC U.S.AND GREAT LAKES TRADES. THESE TRADES DEPEND ON THE SAME PORTS AND FACILITIES AS INTERNATIONAL-BOUND GOODS.

AS SHIPS HAVE BECOME LARGER AND MORE COSTLY TO OPERATE THEY REQUIRE EQUALLY SOPHISTICATED PORTS TO KEEP THEM OPERATING EFFICIENTLY AND ON SCHEDULE. DEEPER AND WIDER NAVIGATION CHANNELS ARE BEING

REQUIRED TO ALLOW THIS NEW GENERATION OF MARINE TRANSPORT TO REACH THE PORTS.

ACCORDING TO 1980 MARAD FIGURES, U.S. PORTS CONTRIBUTED ALMOST $35 BILLION TO OUR GNP AND HAD GROSS SALES AND SERVICES WORTH $66 BILLION ANNUALLY. THE SUCCESS OF OUR PORTS HAS BEEN DUE IN A LARGE MEASURE TO A HERETOFORE WORKING PARTNERSHIP BETWEEN STATE AND LOCAL PORT AUTHORITIES AND THE FEDERAL GOVERNMENT. WHILE STATE AND LOCAL AUTHORITIES PROVIDE THE LAND-BASED CARGO HANDLING FACILITIES THE FEDERAL GOVERNMENT HAS TAKEN ON THE RESPONSIBILITY FOR BUILDING AND MAINTAINING NAVIGATIONAL CHANNELS THAT PROVIDE ACCESS TO THE PORTS. OVER A PERIOD OF TWENTY-TWO YEARS NON-FEDERAL INVESTMENT IN LANDSIDE INFRASTRUCTURE WAS $4.9 BILLION AS U.S. PORTS IMPROVED CARGO HANDLING FACILITIES SUCH AS WHARVES, DOCKS, STORAGE AREAS, CONTAINER YARDS, AND CRANES. THE CASH VALUE OF THESE FACILITIES IS ESTIMATED TO BE $40.4 BILLION AND THE REPLACEAMENT COST AT ABOUT $54 BILLION. TAKEN TOGETHER, INVESTMENT IN MARINE TERMINAL FACILITIES BY STATE, LOCAL, AND PRIVATE SOURCES CERTAINLY IS THE EQUIVALENT TO THE ROLE PLAYED BY THE FEDERAL GOVERNMENT. IN OTHER WORDS, A 50/50 PARTNERSHIP.

THE POSSIBILITY OF REDUCTIONS IN FEDERAL INVESTMENT IN PORT MAINTENANCE GIVES CAUSE FOR CONCERN AS TO THE FUTURE FINANCIAL VIABILITY OF THIS COUNTRY'S PORT AUTHORITIES JUST AS REVENUES ARE RECOVERING FROM THE EFFECTS OF THE RECENT GLOBAL ECONOMIC SLUMP. DREDGING, NAVIGATIONAL AID, AND MAPPING CONSTITUTE THE FEDERAL GOVERNMENT'S TRADITIONAL CONTRIBUTION TO THE U.S. PORT SYSTEM AND THIS CONTRIBUTION REMAINS VITAL. IT IS THEREFORE IMPORTANT TO TAKE NOTE THAT VERY FEW IMPROVEMENTS TO U.S. PORTS THROUGH DREDGING HAVE BEEN UNDERTAKEN SINCE WORLD WAR TWO. NOT ONE NEW U.S. SEAPORT DREDGING PROJECT HAS BEEN AUTHORIZED BY CONGRESS SINCE 1976 DESPITE THE INCREASING SIZE OF MARINE TRANSPORTS AND THE STEADY GROWTH OF U.S. WATERBORNE TRADE.

LET ME CLOSE, MR. CHAIRMAN, BY SAYING THAT NEGLECT OF THIS NATION'S PORTS WILL HAVE FAR-REACHING EFFECTS THAT WILL IMPACT NOT ONLY THE ABILITY OF THE UNITED STATES TO MAINTAIN ITS ECONOMIC SUPERIORITY, BUT COULD JEOPARDIZE OUR FUNDAMENTAL NATIONAL SECURITY. TO MAINTAIN OUR PORTS WE MUST CONTINUE TO COOPERATE ON A FEDERAL AS WELL AS A LOCAL LEVEL.

MR. CHAIRMAN I HAVE SEVERAL QUESTIONS FOR SECRETARY DAWSON THAT I WOULD LIKE TO HAVE HIM ANSWER FOR THE RECORD. I REQUEST, THEN, THAT THE RECORD OF THESE PROCEEDINGS REMAIN OPEN FOR A REASONABLE PERIOD OF TIME TO ALLOW SECRETARY DAWSON THE OPPORTUNITY TO ANSWER THESE INQUIRES IN A THOROUGH AND FACTUALLY ACCURATE MANNER.

ADDITIONAL PREPARED QUESTIONS SUBMITTED FOR THE RECORD

Chairman HATFIELD. There will be additional questions submitted to you by members who are not able to be here today. I have further questions for the subcommittee that I would like to have you respond to, if you could, as rapidly as possible.

[The questions and answers follow:]

IMPLEMENTATION OF AND AUTHORITY FOR STUDY COST SHARING

Chairman HATFIELD. What are these authorities and what are the conditions that would cause you to impose cost sharing on studies?

Mr. DAWSON. Mr. Chairman, we believe that authority found in 33 USC 560 and USC 701h could be employed to accept non-Federal contributions of funds and to apply those funds toward completion of feasibility studies. We would have implemented study cost sharing already, had the committees not indicated their objection to any new financing arrangements at the time the Appropriation Act reports were prepared.

Chairman HATFIELD. The administration, and I assume you because you make the point in your detailed statement, feel that the poorer areas of this country, which in many instances do not have a technical or economical base to share study costs on your terms, will not be afforded the opportunity to share in the benefits of a better quality of life. We all know that without a detailed study, project authorization and implementation are impossible.

So, in effect, the administration is saying that if you cannot pay for the study, then you really don't have a need; is that correct?

Mr. DAWSON. That is certainly not the message we are conveying. Our fundamental premise is that if there is an economically justified solution to a problem, benefits produced by the project provide a basis for project cost sharing, regardless of the wealth of the beneficiaries. Of course, if the only possible solutions cost more than the benefits produced, there would not be sufficient returns to justify 100 percent benefit-based financing and the benefitting community would be better off not constructing the project. Again this would be true regardless of the wealth of the beneficiaries. To reiterate, our policies are tied to productive projects not unproductive ones.

ECONOMIC IMPACT OF COST SHARING

Chairman HATFIELD. Now, Mr. Dawson, I'm sure that you have looked closely at the economic impact that either increased cost sharing or this potential shortfall would have on the Nation's international balance of trade, regional employment, operational safety and the like. Have you evaluated such impacts? Would you like to comment on the international trade impact and trade posture of the Nation as it relates to the O&M proposal?

Mr. DAWSON. To not provide these services to the commercial sector would result in a great loss in economic benefits. It is those very benefits which provide the basis for the cost recovery we are proposing. There is simply no reason for these costs not to be paid by those who benefit directly from them as opposed to by the Nation's taxpayers. As regards to the impact of our O&M cost recovery proposals on our trade posture, the charges on international traffic moving through the ports should be essentially neutral since they would be borne by imports as well as exports. In the case of the inland waterways there could be a small adverse impact as most of the commodity movements related to international trade are export commodities as opposed to imports. In any case, whatever merits there are to subsidizing exports, it is difficult to justify, in my view, subsidizing just those conveyed by the waterways.

Chairman HATFIELD. What do you see as the economic impact, given this budget request, if user fee legislation is not enacted before the start of FY 1986?

Mr. DAWSON. I believe there would be a compelling case for a reconsideration of both the total Civil Works program level and its distribution among the various activities. Certainly at a reduced level of funding, the amount provided for studies compared to the amount for operation of the navigation system could not be justified, for example.

USER FEE LEGISLATION

Chairman **HATFIELD**. Assuming that user fee legislation will not be in place and the budget request is not sufficient to carry out the O&M program as identified, will the administration request additional appropriations to cover the shortfall?

Mr. **DAWSON**. That is a decision, Mr. Chairman, which is most appropriately addressed in the context of the fiscal year 1986 budgetary situation at the time it becomes clear that the user fees will not be able to contribute a reasonable share to the cost of the ports and waterways. Of course, we feel it is imperative that the Congress take prompt action on the user fees. While I am reluctant to speculate about the likelihood of future events, I am confident that we would together—the administration and Congress—take necessary and appropriate action to assure that the priority operation and maintenance activities occur. I do not think it would be wise to rule out consideration at the proper time of any appropriate alternative, such as, for example, the reallocation within the total from Corps planning and construction programs to fund operation and maintenance, or some combination of alternatives. Whatever the case may be, I am pledged to work closely with you to address this concern.

Chairman **HATFIELD**. If the non-Federal contribution is not available, will the budgeted Federal appropriations be used to provide some level of maintenance?

Mr. **DAWSON**. Yes indeed, and, as previously stated, I would expect a substantial reallocation of funds from construction and studies to operation and maintenance to be one alternative which would have to be seriously considered.

NEW CONSTRUCTION STARTS

Chairman **HATFIELD**. Mr. Dawson, your statement talks in very optimistic terms about the potential for resolving the major issues of non-Federal cost sharing and financing. On what do you base such optimism given what appears to be a retrenchment by the administration on some of the cost sharing proposals and the 15-year period since enactment of the last major authorization bill?

Mr. **DAWSON**. The compelling realities of the current budgetary crisis combined with the obvious merits of continued water development and the clear indication of the administration's position on the water program as evidenced in the Department's proposed legislation create a unique set of circumstances that provide a basis for optimism.

Chairman **HATFIELD**. Would the administration support the initiation of a number of new projects which were contingent upon the enactment or subject to enactment of cost sharing legislation? What parameters would be acceptable to the administration realizing the need for compromise with Congress?

Mr. **DAWSON**. I think that very much depends upon the likelihood of new legislation and the likely financial conditions imposed by that legislation. There is great flexibility in the cost recovery mechanisms the administration would accept, it seems to me. However, any new legislation must produce financial returns on the order of those proposed by the administration.

PERSONNEL LEVELS

Chairman **HATFIELD**. It seems inconsistent for the administration to speak in glowing and optimistic terms about resolving the issues that have delayed the initiation of new project construction over the years but not to reflect appropriate personnel levels in the 1986 budget to carry out an increased program—and in fact proposes to cut the Corps even further. Would you care to comment on this point?

Mr. **DAWSON**. Given the ability to contract work out the Corps has enormous capacity to absorb new work within existing personnel levels. Certainly the Corps engineering staff has not declined to the extent that the project design and construction activities have during the past several years.

Chairman **HATFIELD**. Do you expect the administration (OMB) will provide adequate manpower resources to carry out an increased planning and construction program, in an efficient and effective way, if a new start appropriations bill is enacted?

Mr. **DAWSON**. The programmed personnel levels are consistent with the new starts we have budgeted, and, we believe, can accommodate even additional activity.

CONGRESSIONAL INTENT AS REFLECTED IN REPORT LANGUAGE

Chairman **HATFIELD**. The committee is concerned with current policies with respect to language inserted in Committee reports which expresses congressional intent on specific items. Report language, and in some cases bill language, is either ignored or not carried out in accordance with the intent. What are your policies with regard to language in committee reports and conference reports?

Mr. **DAWSON**. In responding to your question, Mr. Chairman, there is of course, a distinction between provisions that are found in an appropriation act and provisions that may be relevant to how funds are spent, but are not included in the act and are found in accompanying committee reports. Provisions not included in the act, as you know, are not binding on the agency as a matter of law but provide very useful indications of congressional intent.

The Army endeavors, in all respects, to fully and completely implement provisions of law and in this regard seriously considers all indicators of congressional intent, whether the indication of intent be a statement of the full Congress found in law or a statement of one or more of the committees found in a committee report.

When both the express provisions of the Energy and Water Development Appropriation Act, 1985, Public Law 98-360, and the accompanying committee reports are considered, the Congress and its committee provided for over 150 items not included in the President's fiscal year 1985 budget. In 15 cases, the Congress provided funds for additional work in the actual provisions of the act itself. The Corps is proceeding with all of this work, except for one unusual case where it was determined that authorizing legislation was needed before the funds could be spent.

In the remaining cases where additional work or studies is advocated or addressed in committee reports alone, the Corps is complying with such committee desires in the great majority of cases. I am advised by the Corps of Engineers that in four out of every five cases that work is going forward without a hitch. Nonetheless, Mr. Chairman, as your question indicates, we are not proceeding with some report items such as additional recreation development at 100 percent Federal expense at five ongoing construction projects mentioned in the Conference Committee report. The Federal Government, through fiscal year 1984, has spent $33 million for recreation facilities construction at full Federal expense at these projects. An additional $2 million was budgeted in fiscal year 1985, and $4 million was carried over from fiscal year 1984 for use in fiscal year 1985 for construction of recreation facilities. We feel that the additional $14 million provided for the five projects at full Federal expense in the Conference report is too important in its policy and budget implications, particularly in this time of large Federal deficits, to take action without further clarification of the full Congress in legislation.

I recognize that this is a particularly sensitive subject, Mr. Chairman. The Department of the Army's proposal to provide further recreation on a 50/50 cost sharing basis, though not required by law, is consistent with OMB pronouncements on the matter going back to the early 1970's and with other Congressional pronouncements on cost sharing for recreation found in the Federal Water Project Recreation Act, Public Law 89-72, enacted in 1965.

Chairman **HATFIELD**. What control does OMB have on how you carry out Congressional direction?

Mr. **DAWSON**. As indicated in my response to your previous questions, the Army is proceeding with the great majority, but not all, of the guidance contained in committee reports accompanying the appropriation act. In those instances where we are not proceeding, the decisions usually are based on broader policy positions which were arrived at in cooperation with the Office of Management and Budget. Generally, OMB does not conduct an item-by-item review of our allotment of appropriated funds. We do, however, keep OMB informed of allotment actions which are of a sensitive or controversial nature. Being an administrative agency we would, of course, respond to any OMB direction that was different than the Army decision.

OPERATION AND MAINTENANCE—OPERATIONAL IMPACTS OF FUNDING SHORTFALL

Chairman **HATFIELD**. Now, the 1986 budget requests $961 million in funding for operation and maintenance to undertake a program requirement of $1.3 billion. This represents a shortfall of $355 million needed to maintain navigation channels and other navigation facilities nationwide.

General Wall, since you are the Director of the Civil Works Program, what would be the operational impact of such a shortfall?

General **WALL**. Mr. Chairman, with your permission, I would like to address my answer to both the Operation and Maintenance, General and Flood Control, Mississippi River and Tributaries Appropriations since they are collectively included in the proposed cost-sharing authorization. If the proposed legislation is not enacted, there would be a shortfall of about 28 percent, or $388 million in the fiscal year 1986 program and would reduce the funding level to $961 million for Operation and Maintenance, General and $269 million for MR&T. In such an event, the Corps would be forced to develop a new program within the funds provided by the Congress.

Of course, we feel it is imperative that the Congress take prompt action on the user fees. While I am reluctant to speculate about the likelihood of future solutions, I am confident that we would together—the Administration and Congress—take necessary and appropriate action to assure that the priority operation and maintenance activities occur. I do not think it would be wise to rule out at this time consideration of any appropriate alternative, or combination of alternatives. Whatever the case may be, I am pledged to work closely with you to address this concern.

OPERATION AND MAINTENANCE—FEDERAL AND NON-FEDERAL COST BREAKDOWN BY PROJECT

Chairman **HATFIELD**. General Wall, the committee would like for you to provide for the record a detailed breakdown of your O&M budget request by project showing the 1986 program requirement in terms of Federal and non-Federal dollars, including a brief explanation of the operational impact if non-Federal cost sharing is not authorized.

General **WALL**. Mr. Chairman, as Mr. Dawson indicated in his opening statement, the proposed legislation would apply to specific existing project beneficiaries in one or a combination of three ways which he previously outlined. These overall amounts were developed on the basis of gross estimates for each category of beneficiary rather than on a project-by-project basis. Therefore, a breakdown by project is not available at this time.

CONSTRUCTION NEW STARTS

Chairman **HATFIELD**. General Wall, it has been a long time (15 years) since the last major omnibus construction authorization bill. And I believe only one or maybe two projects have slipped through and been initiated since 1980. My question is, what has been the loss, in terms of benefits not realized, to the Nation because of the impasse and lack of authorization legislation?

General **WALL**. I think we can all agree that the lack of project authorizations and the impasse over new cost-sharing formulas has deferred benefits from projects that might have been started or even completed over the last 5 years. However, there are too many variables for me to give you any meaningful dollar figure. We don't know which of the scores of projects having completed reports might have been in a bill, but we do believe that the projects which emerge from the review process are sound investments which local sponsors should be willing and able to support financially. I should emphasize, that while these benefits may not be permanently foregone, the water resources problems these projects were designed to alleviate do continue to impact many areas throughout the Nation.

EMPHASIS ON SMALLER PROJECTS

Chairman **HATFIELD**. General Heiberg, your statement says that changing existing cost sharing methods "should result in a future emphasis on smaller or simpler projects." Why aren't we doing this under current procedures?

General HEIBERG. The Corps has always solved water resource problems in a manner consistent with engineering, economic and environmental considerations. Our procedures require that, in arriving at a recommended plan, the desires of local sponsors play an important role. However, since the local sponsor's share of project costs has been relatively small in many cases, they have not been so concerned with either the size or total cost of the recommended project. Increased cost sharing clearly causes local sponsors to take a more critical look at project scope, scaling and timing. This is most clearly demonstrated in the case of deep-draft harbors where local sponsors are examining an array of implementation alternatives reflecting a desire to more closely match the level of investment with the projected benefits in light of their expectations regarding increased cost sharing requirements. Thus it is not a question of planning procedure, rather it is a question of the response of local sponsors to increased cost sharing.

MANPOWER LEVELS

Chairman HATFIELD. Could you briefly review the manpower levels of the Corps' Civil Works Program over the last 3 to 4 years?

General HEIBERG. Manpower authorizations for the Corps' Civil Works Program were reduced significantly for 2 of the last 3 years. From its fiscal year 1982 level, our total authorization has been cut 10 percent.

Chairman HATFIELD. Can you be more specific or explain more fully the statement that "future workloads indicate a real potential for deficiencies in certain functional areas"?

General HEIBERG. In reducing our total manpower usage, we have taken cuts in all functional areas. Although we have tried to preserve our design and engineering expertise to the greatest extent possible, these areas too have been cut to maintain a balanced program. Because of the length of time since the last major authorization bill, we believe that with resolution of cost-sharing issues and an authorization bill, our workload could increase so significantly in the future that we would experience deficiencies in the critical areas of planning, engineering and construction management. We are, however, not proposing any increase in manpower based in the budget nor would I expect such a request on the basis of the enactment of an authorization bill.

Chairman HATFIELD. What would be the estimated manpower shortage with the enactment of the water authorization bill? Could you carry out such a program under your personnel ceiling for 1986?

General HEIBERG. In all probability for FY 1986 we could carry out a program of new starts, including those that would be authorized in a Water Resources Development Act, acceptable to the President and Congress. This takes into account our tentative manpower ceiling and the design status of potential new start projects.

Chairman HATFIELD. Could you carry out in an efficient, effective way, and under optimum schedules, the construction program envisioned by the House of Representatives in H.R. 3958? Or the augmented construction programs proposed in the budget.

General HEIBERG. H.R. 3958 includes authorization for 39 new construction starts. However, 17 of those are already in our new starts recommendations for FY 1986. An increase in our workload of this magnitude in the next few years could be carried out with available manpower through manpower savings anticipated from the productivity improvements that I addressed in my formal statement. Basically these would fall under the broad categories of restructuring of internal operations where cost effective. Our proposed FY 1986 program including 29 new starts was based on our existing manpower authorization.

Chairman HATFIELD. Is it realistic to believe that the Corps could find sufficient management and efficiency savings to offset the shortfall caused by a larger program?

General HEIBERG. The Corps could realistically support a larger Civil Works Program if a higher percentage of work were contracted out.

NATIONAL COUNCIL ON PUBLIC WORKS IMPROVEMENTS

Chairman HATFIELD. The budget proposes the transfer of $3.2 million to carry out the purposes of Public Law 98-501, the Public Works Improvement Act of 1984. What is the purpose, scope, and intent of this legislation?

Mr. DAWSON. The purpose of title I of Public Law 98-501, the Public Works Improvement Act of 1984, is to assess and report on the condition of the Nation's public works and its capability to sustain economic growth. The law establishes the National Council on Public Works Improvements to prepare three annual reports, the first of which is due to the President and Congress on February 1, 1986. These reports are to identify the maintenance needs of public works improvements, assess financing capabilities and responsibilities, and discuss relative priorities in satisfying these needs. The greatest challenge in the study will be to incorporate economic and financial considerations into the evaluation of the Nation's infrastructure. The ultimate issue is not the state of the Nation's infrastructure as measured by physical criteria; it is the issue of defining optimal levels and time paths of investment, replacement, and repair of public works.

Chairman HATFIELD. Isn't this similar and doesn't this duplicate the requirements of the Federal Capital Investment Program Information Act of 1984?

Mr. DAWSON. The Federal Capital Investment Program Information Act of 1984, title II of Public Law 98-501, requires an annual report on the federally controlled infrastructure program. The reports called for under title II would not address many of the State and local public works maintenance needs that would be included with the Federal needs under title I. Both titles are closely related and there will be a need to closely coordinate efforts on both titles. Work done under each title will benefit work done on the other title. Criteria, inventory, and assessments developed under title I will input into the title II report. The identification and analysis of policy issues and factors that affect public civilian capital investment needs, called for in title II, will be equally important to the infrastructure reports produced under title I. I don't see duplication between the titles as I do see a need for the provisions of both titles to be applied to the Nation's infrastructure.

Chairman HATFIELD. While the entire $3.2 million will be transferred, only $300,000 will actually be spent in fiscal 1985. How will the $300,000 be used?

Mr. DAWSON. Currently, we are scoping out the plan of study for the National Council on Public Works, which is established under Public Law 98-501, to review. The actual amount spent will be determined on how fast the Council can be appointed and organized and get started on its first report. Basically, the funds will be used for a small staff with certain contracting capabilities to extend their abilities and to bring in expert advice in various areas. The funds will also be used to provide space and administrative support to the Council. We believe that, given the deadline imposed by the law, the nucleus of the Council staff will have to be detailees from the Advisory Group membership of six Federal agencies and six national interest groups.

Chairman HATFIELD. Can you tell the committee if or when the administration will appoint the members of the Council?

Mr. DAWSON. We anticipate appointment announcement by mid to late March.

FLOOD POTENTIAL FOR FISCAL YEAR 1985

Chairman HATFIELD. General Heiberg, your statement indicates that only about $1.0 million remains in the emergency fund to cover emergency actions for the remainder of this fiscal year. Briefly, give the committee your assessment of the flooding potential for the remainder of the year.

General HEIBERG. We currently have flood problems across the Midwest, the lower Great Lakes, and the Ohio River Valley. So far, the Corps has provided only technical assistance and flood fight materials. The extent of additional flood fight assistance or potential rehabilitation of damaged flood control structures is unknown at this time.

As to the outlook for the remainder of the flood season, there exists a high potential for major flooding across the Great Basin and in the Colorado River basin due to snow melt. The extent of any problems is dependent on precipitation over the next 6 to 8 weeks and the subsequent rate of melt. While no significant snowpack remains over the eastern two-thirds of the country, saturated ground conditions and high river levels do exist. The extent of any flood problems will depend on the location, intensity, and duration of storm events over the next few weeks. Though conditions are primed for potential major flooding in many areas, no forecast of specific problems can be made at this time.

RELATED DISASTER PREPAREDNESS ACTIVITIES

Chairman HATFIELD. Provide for the record a more detailed explanation of how the $8.5 million budgeted for the various preparedness programs will be spent, including identification of any new activities.

General HEIBERG. The funding provided for the Disaster Preparedness Program will be utilized to undertake those activities which support the Corps of Engineers response to flood emergencies under our authority; response to emergencies in support of other agency authorities, particularly the Federal Emergency Management Agency; establishment and maintenance of an emergency operation center required for command and control of responses to disasters under the noted authorities; and, management of the program for the inspection of non-Federal flood control projects repaired or eligible for repair under Public Law 84-99. The activities to support these efforts include the review and update or development of required response plans; the training of response personnel; the development of, and participation in exercises to test plans, personnel and training; the procurement of supplies and equipment necessary to support response efforts; and the overall management of the preparedness activities. No new activities are being undertaken. However, terminology and procedures have been changed to improve management of the program.

PUBLIC LAW 84-99 SUPPLEMENTAL FUNDING

Chairman HATFIELD. Mr. Dawson, if additional funds, beyond those available in the emergency fund, are needed for emergency operations, will the administration make a formal budget request for additional appropriations to cover the shortfall?

Mr. DAWSON. As you may recall, the Chief of Engineers has authority to transfer available funds from other flood control appropriations to meet emergency needs. Any transfers under this authority would be coordinated with this and other appropriate committees. As clearer identification of emergency funding requirements is made, we would coordinate with the administration on the appropriate mechanism to be used to ensure adequate funding.

OPERATION AND MAINTENANCE—CARETAKER STATUS OF PROJECTS

Chairman HATFIELD. I note that the Corps is proposing to add additional projects to caretaker status in 1986. Please provide for the record a list of the new projects being proposed and a brief explanation of the conditions which justify placing each in caretaker status.

General WALL. We are proposing to add three projects or parts thereof, to the list of caretaker projects. These additions include the Dismal Swamp Route of the Atlantic Intracoastal Waterway in Virginia, the Inland Route in Michigan, and the lock operations on the Cross Florida Barge Canal. We are making this recommendation because there is no commercial tonnage passing through these projects to justify a Federal investment in their continued operation under current economic conditions while other higher priority work needs to be accomplished on more viable projects.

MOBILIZATION AND READINESS PLANNING

Chairman HATFIELD. Provide a detailed breakdown of how the Corps plans to utilize the $13.3 million for mobilization and planning.

General HEIBERG. The administration policy is to have the emergency mobilization preparedness capability to ensure decisive and effective Federal response to any national emergency.

To support this objective, the National Emergency Preparedness Program budget was developed to provide the momentum and progress required to develop the Corps' civil readiness capability.

Our continuing job is to think through the process of mobilization or national crisis and produce plans, procedures and facilities so that our response capability and its deterrent value are real.

Ongoing programs are:

a. Mobilization preparedness ($4.3 million).—The Mobilization Preparedness Program consists of activities and services which provide the Corps with the capability and posture for immediate response to the urgent demands of the various phases of mobilization. Included are those activities associated with the identification of specific U.S. Army Corps of Engineers' mobilization missions, the analysis of mobilization resources, the establishment of organizational and operational procedures, the preparation and publication of contingency plans, and the participation of mobilization exercises to test the capability of the Corps to respond under a mobilization. Also included is the necessary planning coordination with related Federal, State, and local entities.

b. Continuity of Government preparedness ($2.7 million).—The Continuity of Government (COG) Program consists of activities and services which provide the Corps with the capability to reconstitute itself and to ensure that the Corps of Engineers can provide support for the Nation during national emergencies other than mobilization. Included are those activities associated with the identification of the U.S. Army Corps of Engineers' national emergency missions, the establishment of organizational and operational procedures, the preparation and publication of contingency plans, and the participation in COG exercises to test the Corps ability to respond under a national emergency other than a mobilization. Also included is the necessary planning coordination with related Federal, State, and local entities.

c. Emergency water planning ($1.5 million).—The Emergency Water Preparedness Program consists of activities and services which provide the Corps with the capability and posture to meet defense and essential civilian water needs during national emergencies. Executive Order 11490 directs the Corps to provide national leadership and coordination for the development of Federal emergency plans for the management and allocation of water resources in the national interest during an emergency. Some of the products this effort will produce are: emergency water plans for mobilization and continuity of operations, emergency notification procedures, data base development, prototype and concept studies, and interagency coordination.

d. National emergency facilities ($4.8 million).—The National Emergency Facilities Program consists of activities which provide the Corps with emergency relocation site (ERS) and emergency operations center (EOC) facilities. The EOC's are required for efficient command, control, and communications during national emergencies, mobilization and exercises. The ERS's are required for the survival of the Corps' command and control structure during and immediately following a nuclear attack upon the continental United States. Included are those activities associated with the development, operation and maintenance of the facilities. Also included is the procurement of supplies and equipment to support the facilities.

Chairman HATFIELD. What portion of the $13.3 million supports national security or defense requirements?

General HEIBERG. To clarify the question, the entire $13.3 million goes toward the Corps' program to meet its civil responsibilities to support the national security and defense in the time of a crisis. It is not intended to support specific military service related mission requirements that are resourced by the Defense appropriation or specific military accounts, e.g., Military Construction Army (MCA) and Operation and Maintenance, Army (OMA). The purpose of our Mobilization and Readiness Program is to develop and posture civil works resources to effectively execute the assigned national emergency civil functions consistent with current directives.

Civil Works forms the basis upon which the Corps will rely to meet the significant construction requirements that a national mobilization would entail. Crucial to national defense will be the civil support that the Corps provides the Nation in the form of assistance to other executive agencies, State, and local authorities, as well as continuing Civil Works projects critical to the Nation and its defense (e.g., reservoir operation and power production response to national emergencies, dredging, and operation of important waterways.

Chairman HATFIELD. How is the civilian portion of this activity different from the planning and preparedness activities carried out under the flood control and coastal emergencies?

General HEIBERG. The $13.3 million are used primarily by the Corps to develop and maintain a high state of preparedness to meet its civil responsibility in the event of a national emergency, be it a general war or a nuclear attack on the United States. Some items included are: Preparation of plans, standard operating procedures, studies, conducting training, and participation in mobilization-continuity of Government/operation exercises directed by the Department of Army (DA) and the Joint Chiefs of Staff (JCS). The $13.3 million also includes funds to conduct emergency water planning, MACRO-mobilization studies and preparation and operation of emergency relocation sites and emergency operation centers.

Preparedness program activities under Public Law 84-99, flood control and coastal emergencies, are those required to ensure Corps of Engineers response to flood emergencies under Public Law 84-99 and in support of other agency authorities for response to manmade and natural disasters.

COMPARISON WITH MILITARY BUDGET

Chairman **HATFIELD**. How much is budgeted for fiscal year 1986 under the military construction appropriation for similar activities?

General **HEIBERG**. $5.1 million has been requested in the 1986 MCA budget request to support the ongoing Corps program to develop a series of standardized designs commonly referred to as M-drawings. These are military facility designs identified by major Army commanders as most critical to the successful support of their mobilization missions. To date, the Corps has completed or is in the final stage of completing 144 designs necessary to support the Army's troop base.

This year's request will advance the program toward the development of standardized facilities designs for the Army's production and storage base requirements, i.e., the Government-owned ammunition plants, arsenals, depots, proving grounds, etc.

Through the use of the M-drawings and other peacetime preplanning, the Corps expects to reduce the mobilization construction response time by some 90 days in the event of a national emergency.

NATIONAL EMERGENCY FACILITIES

Chairman **HATFIELD**. This activity has grown from a $5.0 million level in 1984 to $13.3 million in the 1986 request, an increase of 166 percent. Explain the $4.8 million requested in the budget for national emergency facilities.

General **HEIBERG**. The ability of the Corps to reconstitute itself as a functioning entity in the event of nuclear attack is imperative if the Corps is to continue its responsibilities for providing civil construction support to the Federal Emergency Management Agency, support to other executive agencies, and provide the civil construction response capability to support the continuation of the Government, and serve as the emergency water resource manager for the Nation.

The current location of each Corps element is within a targeted area based upon information from FEMA publication TR-82. Consequently, each element anticipated to have an immediate post-nuclear mission will require an emergency relocation site (ERS) (a total of 53 individual sites).

Fiscal year 1986 funding will be used to operate and maintain existing emergency operations centers (EOC) and ERS. Additionally, significant funding will be used in the upgrading or conversion of Government-owned facilities to serve as ERS's. Three individual ERS's (headquarters, U.S. Army Corps of Engineers, Lower Mississippi Valley Division, and the St. Paul District of the North Central Division) are scheduled to be developed while the remaining elements will begin the design and analysis process.

Please note, the fiscal year Energy and Water Development Appropriations Conference Report (H. Rept. 98-866) directed the Corps to prepare a detailed plan outlining the purpose, number, and costs of the ERS's. Work is underway to complete the report for submission to the committees. Planning continues; however, actual site development is being held in abeyance, pending congressional approval of the ERS report.

Chairman **HATFIELD**. This item is not shown in the 1985 justification—is it a new item for 1986?

General **HEIBERG**. Yes and no. Yes, this is the first year we have used the activity account national emergency facilities; however, no, this does not represent any new activity but only combines two fiscal year 1985 accounts, emergency operations center and emergency relocation sites into a more generic description national emergency facilities.

Chairman HATFIELD. What portion of the 1986 request is related to the emergency relocation sites and for what specific purposes?

General HEIBERG. $4.8 million will be used for the development, maintenance of emergency relocation sites/facilities. I will furnish a breakdown for the record.

EMERGENCY RELOCATION SITES

$1.2 million, development of an ERS for headquarters, Corps of Engineers; $0.7 million, development of ERS for the Lower Mississippi Valley Division; $0.45 million, development of ERS for St. Paul District, North Central Division; $1.9 million, preparation of plans and designs for ERS at 36 Corps districts plus New England and Pacific Ocean Divisions (est. cost $0.05 million per site); and $0.55 million, operation and maintenance of existing relocation sites.

PROJECT CHOSUN

Chairman HATFIELD. Does the Corps' 1986 budget include funding to support directly or indirectly Project CHOSUN? If it does, how much is included and for what will the money be used?

General HEIBERG. No, sir, the 1986 Corps' budget does not include any funds directly or indirectly for Project CHOSUN.

HOPPER DREDGE BID EXPERIENCE

Chairman HATFIELD. Can you provide for the record a tabulation which shows the Corps' bid and actual cost experience (over the last two years of record) for navigation maintenance dredging by hopper dredge and non-hopper dredge nationwide? Structure the chart similar to that provided last year for hopper dredges.

General HEIBERG. Yes, sir.

CORPS OF ENGINEERS HOPPER DREDGE BID OPENINGS 1984

PROJECT	CU YD	LOW BID	GOVT EST.	NO BID	%
CALCASIEU BAR CHANNEL	9,000,000	$3,577,580	$3,258,350	2	110%
MISS RVR SOUTHWEST PASS	7,000,000	$3,399,960	$3,223,750	2	105%
MR BATON ROUGE TO GULF	1,100,000	$2,348,670	$2,118,940	2	111%
CHIMCOTEAGUE INLET	200,000	$759,000	$676,648	1	118%
PENOBSCOT RIVER	62,800	$239,268	$471,000	6	51%
OREGON COASTAL PROJECTS	350,000	$1,355,000	$837,007	1	162%
COLUMBIA RVR AT MOUTH	6,380,000	$10,387,200	$8,364,217	2	124%
YAQUINA BAY & HBR	470,000	$517,200	$442,851	2	117%
CALM BAR HOPPING	800,000	$960,000	$1,140,303	2	84%
GEORGETOWN ENTRANCE CHANN	325,000	$999,000	$927,000	2	108%
FERNANDINA HBR & MAYPORT	250,000	$2,999,902	$2,768,338	1	108%
GULFPORT PENSACOLA	1,200,000	$3,944,284	$3,156,444	3	125%
BRUNSWICK HBR	2,308,500	$7,756,350	$6,451,120	1	120%
MOREHEAD CITY HBR	955,000	$3,059,400	$2,910,650	3	105%
MANTEO SHALLOWBAG NC	500,000	$3,039,000	$2,473,000	1	123%
WILMINGTON HBR	700,000	$3,981,610	$3,382,316	1	118%
SPB & MARE ISLAND ST I	1,000,000	$1,481,000	$1,818,289	5	81%
HUMBOLDT HARBOR'S BAY	425,000	$560,000	$925,772	2	60%
REDWOOD CITY HBR	1,020,000	$2,948,000	$3,669,000	4	80%
SUISUN BAY CH & PINOLE SH	616,900	$1,216,840	$1,086,555	2	112%
RICHMOND HARBOR	348,000	$726,400	$957,600	3	76%
HUMBOLDT HARBOR	356,000	$762,000	$798,345	2	95%
SABINE-NECHES WTWY OUTE	3,700,000	$5,577,160	$8,307,390	2	67%
	39,067,200	$62,634,824	$60,164,885		

CORPS OF ENGINEERS NON-HOPPER DREDGE BID OPENINGS 1984

PROJECT	CU YD	LOW BID	GOVT EST.	NO BID	%
INTERCOASTAL WW	120,000	$434,444	$562,555	3	77%
WILMINGTON HBR CHNISTINA	509,800	$640,290	$554,456	1	115%
NEW LONDON HBR CT	20,000	$289,000	$269,000	2	107%
WETHERS FIELD COVE	10,000	$43,900	$22,400	1	196%
CLINTON HBR CT	15,000	$97,200	$138,000	3	70%
COWLITZ RIVER	2,000,000	$3,960,000	$4,028,000	4	98%
GOLD BEACH BOAT BASIN	20,000	$108,200	$115,700	3	94%
WILLAMETTE RIVER	800,000	$1,544,000	$1,782,424	4	87%
LITTLE RIVER INLET	374,000	$1,387,240	$1,182,000	1	117%
MOBILE HARBOR	350,000	$913,000	$1,167,776	5	78%
SAN FRANCISCO HBR ALCATRZ	24,000	$387,200	$387,700	1	100%
SAN LEANDRO MARINA	220,000	$852,898	$1,024,255	3	83%
GIWW FREEPORT-CEDAR LAKES	1,680,000	$2,652,162	$3,947,814	7	67%
MATAGORDA SHIP CHNL	100,000	$2,483,800	$2,236,600	3	111%
GALVESTON HBR AND CHNL	4,329,000	$11,302,370	$10,677,630	3	106%
GIWW EMER MATA BAY	132,000	$239,760	$203,820	3	118%
HOUSTON SHIP CHNL BOLIVAR	2,502,000	$1,263,450	$2,033,500	5	62%
GIWW PORT ISABEL MUD FLAT	2,000,000	$615,461	$1,163,360	7	53%
BALTIMORE HBR CH MD&VA	4,300,000	$13,241,451	$17,495,044	4	76%
NEW YORK & NEW JERSEY CH	1,074,621	$4,767,159	$3,869,697	3	123%
BAY RIDGE & RED HOOK CH	355,670	$1,038,110	$888,410	3	117%
NEW YORK & NEW JERSEY CH	550,198	$2,210,435	$1,892,712	3	117%
MILTON HARBOR NY	93,970	$429,060	$797,078	6	54%
MILITARY OCEAN TERMINAL N	1,700,000	$6,211,411	$5,400,496	3	115%
NEWARK BAY HKNSCK & PASSA	905,415	$379,272	$3,357,866	3	11%
DULUTH SUPERIOR	155,000	$1,133,830	$1,147,932	3	99%
GREEN BAY HBR	105,300	$516,300	$581,328	6	89%
CHELSEA RIVER MA	25,000	$116,620	$110,000	3	106%
PORTLAND HARBOR ME	34,000	$258,000	$355,400	5	73%
KENNEBUNK RIVER, ME	30,000	$232,200	$274,800	5	84%

PROJECT	CU YD	LOW BID	GOVT EST.	NO BID	%
DEPOE BAY	10,000	$47,500	$56,000	6	85%
CHETCO AND COQUILLE RVRS	5,000	$86,415	$87,884	2	98%
C&LW COWLITZ R. OLD MOUTH	40,000	$141,200	$264,680	3	53%
SEATTLE HBR	120,000	$255,600	$332,100	4	77%
SWINOMISH CHANNEL	50,000	$121,670	$170,513	3	71%
OAK BAY CANAL	20,000	$56,000	$82,500	2	68%
WILLAPA HBR BAY CENTER CH	83,200	$413,670	$400,590	4	103%
WALTER SLOUGH	6,000	$123,040	$66,540	1	185%
PT MOLATE NAVAL FUEL DK	300,000	$509,270	$587,250	2	87%
MISSISSIPPI RIVER NEW ORL	8,000,000	$4,773,044	$4,880,118	1	98%
POCOMOKE RIVER	67,000	$266,428	$362,213	4	74%
HONGA RIVER	136,000	$490,000	$447,580	5	109%
PALM BEACH	100,000	$967,600	$923,070	2	105%
GIWW, FL	1,000,000	$1,366,370	$2,186,504	4	62%
MISS. RVR HBRS NEW ORLEAN	1,500,000	$1,371,826	$1,461,971	3	94%
WHITE RIVER AR	1,200,000	$1,042,970	$1,166,487	2	89%
MISS RVR HBRS 537-932	3,000,000	$3,343,540	$3,142,914	2	106%
ATCHAFALAYA BAY	1,000,000	$720,000	$812,150	5	89%
MISS RV NEW ORLEANS HARBO	3,575,000	$1,742,365	$2,092,625	4	83%
MISS RV SOUTHWEST PASS MI	7,500,000	$5,816,750	$6,779,560	4	86%
CALCASIEU RV MI22.1-36.0	6,600,000	$2,845,000	$5,518,623	5	52%
MR-GO MI 18.3 TO -9.0 NC	13,080,000	$6,649,000	$6,228,900	2	107%
ATCH BASIN BERWICK BAY H	1,519,500	$813,850	$926,450	2	88%
MISS RV OUTLETS AT VENICE	998,000	$578,940	$798,900	5	72%
CHENE,BOEUF,BLACK,ATC GUL	8,500,000	$1,914,325	$3,736,500	6	51%
OLD RV 3 RV'S PORT ALLEN	821,000	$887,510	$1,044,175	5	85%
HOUMA NAV MI 9.6 TO -3.7	1,694,000	$1,208,400	$1,342,600	1	90%
POTOMAC RVR AT MT VERNON	27,700	$155,248	$182,730	5	85%
CHESTER RIVER	40,000	$175,833	$426,500	4	41%
WICOMICO RVR	134,700	$532,300	$724,229	6	73%
SHOAL HBR & COMPTON CREEK	138,087	$631,987	$726,872	2	87%
KEYPORT HARBOR N.J.	200,000	$581,617	$873,269	5	67%
RARITAN RIVER N.J.	300,000	$1,183,404	$1,050,415	1	113%
NORFOLK HARBOR 45-FT CHAN	2,672,000	$2,972,480	$3,398,195	3	87%
OYSTER CHANNEL	50,000	$264,000	$299,271	2	88%
JAMES RIVER - RH & RDWT	250,000	$494,041	$737,191	2	67%
BROAD CREEK	50,000	$284,048	$238,533	3	119%
LYNNHAVEN INLET	200,000	$624,320	$641,006	3	97%
NJIWW/MURDERKILL RIVER	275,000	$545,260	$616,248	2	88%
SALEM RIVER	320,000	$679,830	$702,650	3	97%
INDIAN R.I. BEACH NOURISH	380,000	$732,200	$967,965	3	76%
KEWAUNEE HBR	12,000	$59,986	$90,496	7	66%
CHATHAM STAGE HARBOR MA	50,000	$297,600	$353,400	3	84%
PORT ORFORD	15,000	$121,936	$99,118	3	123%
C&LW CARROLS CHANNEL	1,000,000	$1,275,000	$1,317,000	4	97%
COOS AND MILLICOMA	30,000	$78,500	$85,500	5	92%
ROGUE RIVER HBR	40,000	$108,200	$115,700	3	94%
C&LW CARROLLS CHNL	2,500,000	$3,793,000	$3,053,434	4	124%
PORT ORFORD	15,000	$76,000	$105,678	3	72%
COLUMBIA RVR AT BAKER BAY	320,000	$1,170,000	$1,058,097	2	111%
QUILLAYUTE RVR	116,000	$390,210	$448,55[illegible]	5	87%
EVERETT HBR	235,000	$2,664,900	$3,262,800	2	82%
OHIO RVR OPEN CHNL	3,000,000	$3,512,454	$3,249,993	1	108%
AIWW CHAS-P R FOLY CHHBR	770,000	$547,420	$830,800	4	66%
NAVY CHANNEL CHSN HBR	1,128,700	$891,447	$954,499	3	93%
NAVAL SHIPYARD N P&Q	370,000	$301,600	$369,200	4	82%
CLOUTER CK RELOC CHARS HB	997,000	$1,372,450	$1,409,600	3	97%
GEORGETWN SAMPITR.&UPPER	1,475,000	$1,337,650	$1,733,000	3	77%
CHAS HBR DREDGING VARIOUS	1,480,000	$1,387,400	$1,257,000	3	110%
CANAVERAL HBR.	220,000	$488,830	$738,229	4	66%
IWW MARTIN & ST LUCI IN	500,000	$2,666,050	$3,170,400	1	84%
ST.GEORGE APAL. BAY	66,500	$380,375	$466,935	3	81%
GIWW-FLA	1,000,000	$743,782	$1,255,648	5	59%
BLACK WAR/TOMBIGBEE RVS	1,000,000	$1,259,200	$2,768,338	6	45%
BILOXI GIWW DI BATRE CODN	2,400,000	$767,350	$1,606,854	4	48%
TENN-TOM WW AL & MS	800,000	$2,057,800	$2,446,120	4	84%
TENN-TOM COLUMBUS POOL*8A	1,400,000	$3,672,492	$3,736,573	1	98%
PANAMA CITY FL	300,000	$377,000	$769,531	3	49%

PROJECT	CU YD	LOW BID	GOVT EST.	NO BID	%
GIWW FLA	1,000,000	$1,366,370	$2,186,504	4	62%
PASCAGOULA HBR MS	750,000	$2,328,678	$2,920,290	5	80%
IWW SAV'H TO JKSNVLLE	1,001,600	$687,088	$892,194	6	77%
EAST RIV-BRUNSWICK HBR	421,300	$289,845	$498,294	5	58%
SAVANNAH HBR	2,000,000	$2,460,800	$1,983,949	2	124%
SAVANNAH HBR	2,500,000	$3,056,400	$4,502,319	2	68%
ROLLINSON CHANNEL	30,000	$141,569	$228,658	3	62%
MOT SUNNY POINT	1,800,000	$1,453,250	$1,377,690	3	105%
MANTEO SHALLOWBAG NC	360,000	$3,039,000	$2,473,000	1	123%
BEAUFORT HBR	220,000	$744,990	$473,751	2	157%
AIWW	500,000	$1,598,617	$1,845,400	1	87%
SAN JOAQUIN R	350,000	$639,000	$1,130,600	4	57%
VENTURA MARINA	150,000	$300,601	$500,000	3	60%
SANTA CRUZ HBR	130,000	$580,678	$514,500	2	113%
MOSS LANDING HARBOR	133,000	$516,579	$623,000	4	83%
NOYO R & HBR	23,600	$199,200	$213,020	4	94%
SABINE-NECHES WTWY LWR RC	2,911,000	$2,619,110	$3,649,150	6	72%
SABINE-NECHES WTWY PORT A	3,211,000	$1,534,998	$3,433,940	4	45%
HUSTON SHIP CHNL SIMS BAY	1,123,500	$1,953,200	$2,682,485	6	73%
TEXAS CITY CHANNEL	2,505,000	$156,504	$2,615,079	5	6%
FREEPORT HBR	1,325,000	$3,486,000	$3,277,000	2	106%
HOUSTON SHIP CHNL MORGAN	1,000,000	$1,983,820	$4,046,222	4	49%
MCCLELLAN-KERR ARK RVR	300,000	$896,050	$869,960	3	103%
MCCLELLAN-KERR ARK RVR	500,000	$558,500	$572,850	1	97%
MCCLELLAN-KERR ARK NAV SY	500,000	$210,000	$241,200	3	87%
CONNECTICUT RVR	200,000	$1,215,000	$1,036,000	3	117%
NOR HR: C.I. REHNDLNG BSN	2,678,000	$3,162,619	$3,284,673	4	96%
ONTONAGON HBR MI	34,100	$156,420	$158,510	5	99%
SHEBOYGAN HBR WI	50,000	$352,600	$395,000	4	89%
PRESQUE ISLE HBR MI	23,600	$158,500	$153,948	6	103%
KAWKAWLIN RIV MI	37,400	$154,752	$223,639	5	69%
ARCADIA HBR MI	6,000	$59,550	$69,061	5	86%
PENTWATER HBR MI	15,000	$59,550	$69,061	5	86%
LELAND HBR MI	18,000	$57,735	$62,244	5	93%
LITTLE LAKE MI	30,900	$144,960	$175,752	5	82%
DETROIT RVR	25,000	$862,940	$712,832	2	121%
MISSISSIPPI RV	225,000	$1,144,550	$1,456,615	7	79%
WILD BENDS MISS RV	300,000	$1,496,000	$1,255,000	5	119%
KING COVE	25,000	$342,000	$638,000	8	54%
OHIO RVR OPEN CHNL	40,000	$98,200	$111,928	5	88%
PONCE DE LEON SO INT CHN	100,000	$287,580	$408,635	5	70%
PDI EC IWW-DADE CTY BNI	850,000	$4,970,960	$4,652,000	1	107%
NEW YORK HBR-SANDY HOOK	2,500,000	$21,012,999	$21,012,999	4	100%
E ROCKAWAY TO ROCKAWAY IN	1,500,000	$96,515	$1,045,149	3	9%
DELAWARE R PHIL-TO-SEA	3,425,000	$13,610,000	$12,573,610	1	108%
MONROE HBR	98,900	$378,510	$616,851	7	61%
COOS BAY - MILE 13-15	800,000	$1,307,500	$1,423,903	3	92%
JAM-P'TWN NAV BSSN FUEL P	2,300,000	$8,302,200	$6,909,156	3	120%
TOLEDO HARBOR	450,000	$1,957,000	$1,664,050	4	118%
FAIRPORT & CONNEAUT HBRS	210,000	$670,000	$788,900	4	85%
SANDUSKY HBR	150,000	$412,500	$481,500	4	86%
TOLEDO HBR	400,000	$1,558,000	$1,454,000	5	107%
BUFFALO HBR	90,000	$473,800	$398,850	8	119%
ROCHESTER & OSWEGO HBRS	215,000	$687,500	$861,175	5	80%
HURON&LORAIN HBRS-PROTEST	300,000	$1,314,650	$842,630	4	156%
CLEVELAND HBR	585,000	$3,391,250	$2,932,200	3	116%
OGDENSBURG HBR(EST DATES)	64,500	$767,000	$725,400	3	106%
CALUMET HBR & RVR	150,000	$856,900	$1,167,100	5	73%
GRAND HAVEN HBR	54,400	$233,625	$328,930	3	71%
HOLLAND HBR	36,500	$157,210	$177,811	3	88%
HOLLAND HARBOR	54,400	$233,625	$328,930	3	71%
GRAND HAVEN HBR MI	78,300	$287,950	$495,731	4	58%
KENOSHA & MANITOWIC HBRS	52,300	$237,670	$343,447	6	69%
LUDINGTON HBR	53,700	$187,350	$178,004	5	105%
MUSKEGON HBR	48,900	$157,525	$223,801	5	70%
ST. JOSEPH HBR	12,700	$66,675	$101,695	5	66%

T. JOSEPH HBR	10,000	$396,000	$449,900	6	88%
ANISTEE HBR	28,900	$100,800	$164,434	7	61%
OUGE RIVER & DETROIT RVR	680,700	$3,871,120	$3,650,405	4	106%
AGINAW RVR	150,000	$790,450	$648,501	3	122%
ORTH COVE, OLD SAYBROOK	79,000	$385,770	$458,680	4	84%
AMPTON HARBOR NH	27,900	$248,310	$174,375	2	142%
NCHORAGE HBR	550,000	$1,449,000	$1,850,000	6	78%
& W PORTLAND HARBOR	600,000	$1,169,000	$1,533,242	4	76%
RAYS HBR	1,380,000	$2,664,900	$3,263,000	2	82%
AMPA HBR	3,600,000	$26,373,850	$27,918,825	4	94%
	161,876,061	$283,287,623	$317,705,854		

CORPS OF ENGINEERS HOPPER DREDGE BID OPENINGS 1985

THROUGH 15 FEB 85

PROJECT	CU YD	LOWBID	GOVT EST.	NO BID	%
MISS R BATON ROUGE-GULF	2000000	1326000	1432140	4	93.
CANAVERAL CUT-1A (RFP)	685000	1481750	1986757	6	75.
	2685000	2807750	3418897		

CORPS OF ENGINEERS NON-HOPPER DREDGE BID OPENINGS 1985

THROUGH 15 FEB 85

PROJECT	CU YD	LOWBID	GOVT EST.	NO BID	%
MERMENTAU MI 6.2 TO -2.5	724000	444465	719340	5	62.
PORT CHESTER HBR	96650	1424621	745172	5	191
HYANNIS HARBOR	27000	114750	140940	5	81.
PARRIS ISLAND MARINA	60000	117250	162000	4	72.
CHSN HBR AND NAVAL PIERS	845000	943750	908750	4	104
COOPER RV, FILBIN CK RCH	385000	1312900	2098000	4	63.
ANCHORAGE BSN SHUTES RCH	1400000	2982000	2406000	2	124
LWR CHSN HBR AND SHIPY RV	1700000	1471000	1630700	3	90.
SOUTH HAMPTON	3850000	8377500	9605000	5	87.
BUTTERMILK CHANNEL	126759	641755	586060	2	110
BAY RIDGE	1758328	7789393	7156395	3	109
SANDY HOOK BAY	654625	3718270	3430235	3	108
NEW LONDON HURRICANE PRO	10850	837050	655595	5	128
GREEN HARBOR	40000	152800	230000	4	66.
NO HARBOR LEASED DREDGE	2800000	1217790	1551430	3	78.
FRESHWATER GULF ENTRANCE	1067000	475800	726441	6	65.
MS RV SOUTHWEST PASS	7500000	5497900	6673195	5	82.
POCOMOKE RIVER	67000	266428	362212	4	74.
HONGA RVR & TAR BAY	135000	490000	370060	5	132
LITTLE WICOMICO RIVER	9700	111611	145850	4	77.
QUILLAYUTE RIVER	90000	417600	396000	6	105
MAYPORT NAVY BASIN	1200000	2054900	2155443	3	95.
FREEPORT HARBOR	1077000	1865645	2843327	6	66.
PALM BCH HBR (RFP)	132000	857440	1112714	3	77.
FERNANDINA INNER HBR	350000	1599450	2413191	8	66.
	26105912	45182068	49224050		

COASTAL ENGINEERING RESEARCH BOARD (CERB)

Chairman HATFIELD. Explain why last year's budget request for the Coastal Engineering Research Board was $220,000 and the 1986 budget justification shows an allocation of $230,000 for this activity. What accounts for the $10,000 increase over the 1985 allocation?

General HEIBERG. The allocation for CERB for fiscal year 1985 increased to cover the costs of writing, editing and publishing the proceedings of the semiannual meetings of the CERB. The $10,000 increase from fiscal year 1985 to fiscal year 1986 is to cover the costs of inflation.

RIPRAP TEST FACILITY

Chairman HATFIELD. The 1986 budget request includes $985,000 to initiate construction on a riprap test facility. Discuss briefly the problems being addressed, particularly as they relate (in practical terms) to your O&M work nationwide.

General HEIBERG. Riprap consisting of crushed and graded stone is the most common material used to protect channel boundaries of Corps of Engineers Civil Works projects. Improved riprap design guidance, which will result in reduced annual maintenance of these channels, could result in a reduction of the total volume of riprap thus saving millions of dollars annually.

Chairman HATFIELD. Why can't an existing facility be modified to accommodate this work? Was this considered? If so, what was the estimated cost?

General HEIBERG. The existing facilities at the Waterways Experiment Station have very small discharge capacities and are located in areas where they cannot be expanded in length and width. Also, the volume of water needed for an expanded facility is not available and the space is not available to expand the sump and pumping facilities. Expanding an existing facility was considered, but it was not feasible for the required size of test flume and discharge.

Chairman HATFIELD. Is there a similar capability in the private or university sectors that could accomplish this work?

General HEIBERG. There are some flumes with larger discharge capabilities than the existing flumes at WES. However, there are no flumes with the capability to accomplish all of this work. WES has contracted with Colorado State University to conduct some work on riprap size and gradation, but their facilities are limited to discharges such that the required larger riprap sizes cannot be tested to failure.

Chairman HATFIELD. Where would the proposed new facility be located?

General HEIBERG. The facility would be located at the Waterways Experiment Station, Vicksburg, MS.

HYDRAULIC LAB ADDITION

Chairman HATFIELD. The budget also includes funds to complete design and initiate construction on a new hydraulic lab building addition. What is the total space currently being used to house hydraulic lab functions? What space savings will be realized as a result of this consolidation?

General HEIBERG. The new hydraulic lab office building will replace about 23,500 square feet of existing office area. The new office area will be about 35,000 square feet. The office space for the addition was based on allowable space prescribed by Army Regulation 405–70. The expansion will increase the capacity of the hydraulic lab building from 42 to about 120 personnel. This will permit us to vacate a small permanent office building, a small office work area inside a larger building, and 16 portable buildings, trailers, etc., with a total area of about 11,000 square feet. It will also permit us to convert another 10 to 15 portable buildings from engineers' offices to work areas for technicians, model control rooms, etc. These functions are presently colocated with engineers' offices, creating unsuitable office conditions for our professional staff, cramped working conditions, low morale, etc.

Essentially all of the facilities being vacated will be removed from the Waterways Experiment Station and disposed of in accordance with existing regulations.

Chairman HATFIELD. What is the estimated cost per square foot of the lab space and how does it compare with other similar facilities?

General HEIBERG. The estimated cost is $61/square feet as compared to the latest

Means Construction Cost Data Manual range for Mississippi of $41 to $69/square feet. The addition includes significant requirements for computer operations, which cause the estimated cost to be the upper portion of the range.

RIPRAP TEST FACILITY VERSUS HYDRAULIC LAB ADDITION

Chairman HATFIELD. Discuss the relative priorities of the two new facilities proposed in the 1986 budget in terms of meeting identified program requirements.

General HEIBERG. Expansion and relocation of the hydraulics laboratory office building (building 3200) impacts almost all work ongoing in the laboratory. Most of our nonsupervisory engineers and scientists are dispersed throughout WES in portable buildings, trailers, small dilapidated office buildings, etc. Because of the large and increasing workload in numerical modeling, they spend an inordinate amount of time traveling between their offices and their computer facilities in building 3200. In order to improve efficiency of operations, they should be located closer together and in the same building with the computer facilities and their supervisors. Furthermore, the energy efficiency of all of the dispersed offices is very poor. Thus, a major expansion of building 3200 is required to centralize personnel and vacate many of the existing energy-inefficient buildings. Delaying expansion and renovation of building 3200 will result in continued lost time and unnecessary expense on continued excessive energy consumption. Construction of the riprap test facility is required to conduct research needed to develop improved design guidance for riprap to protect flood control and navigation channels from erosion. Pending construction of this new facility, research is being conducted at smaller facilities at WES and Colorado State University. As soon as the new facility is available, the research emphasis can be shifted to those areas which cannot be studied in the smaller facilities. Delaying construction of the riprap test facility will delay the development of design guidance which cannot be developed in existing facilities. This improved design guidance could result in annual O&M savings of several million dollars.

Chairman HATFIELD. If it were not possible to begin both of these structures in fiscal 1986, which carries the highest priority?

General HEIBERG. While we consider each of these structures important to our continued Research and Development Program, we would place the highest priority on the addition to the hydraulic laboratory building.

Chairman HATFIELD. With a declining program, won't there be a problem in the future in funding these types of facilities through the revolving fund?

General HEIBERG. These types of facilities are funded through the revolving fund during construction. When they are completed a variety of research and development funds will be utilized to reimburse the revolving fund over the life of the structure, based on the projects and programs assigned to the Waterways Experiment Station. Our research and development program funding has had stable funding for the past several years, and I believe this trend will continue. The O&M and rehabilitation programs which are increasing, will make even greater use of the capabilities of the riprap test facility and the hydraulics laboratory. These structures will be paid for in the same manner as other facilities and structures at the Waterways Experiment Station. I believe their acquisition is necessary to meet the continuing and projected workload requirements of WES, and do not anticipate significant reductions in workload or funds in the future.

MODEL SHELTER PROGRAM

Chairman HATFIELD. Provide for the record the projected program plan and detailed planning and construction schedule through completion of the model shelter program.

General HEIBERG. It is difficult to project accurately the model shelter construction program. As model studies are complete, the models are destroyed to make room for new models. Because of the wide variety of sizes, shapes, and special facilities required for new models, available shelter space is not always suitable for specific new models. When the demand for new models exceeds the rate at which existing shelter space becomes available by model destruction or when existing shelter space is inadequate for a particular new model, additional shelter space is requested through the Plant Replacement Improvement Program. Although WES has no control over when new models will be authorized, we are aware of several studies which are in the planning stages and may be authorized in the next few years. For planning purposes, we assume that there will not be an urgent need for a new shelter in fiscal year 1986. However, there may be modifications to existing shelters to meet the fiscal year 1986 workload. For that purpose, $600,000 was estimated for fiscal year 1986. Proposed models which may require new shelter space in the next 1 or 2 years include four models of Red River locks and dams, Louisiana; Oliver lock and dam, Alabama; Markland lock and dam, Indiana and Kentucky; Cumberland River, TN; and four models of the Han River, Korea.

DUSTPAN DREDGE

Chairman HATFIELD. The budget includes funds to begin construction of a new dredge to replace one of the Corps' three operational dustpan dredges. This is the first dustpan dredge replacement which is part of a program to bring the Federal nonhopper fleet up to technological, modern and efficient standards. Could you discuss or provide for the record, the Corps' plan, schedule, and budgetary requirements by fiscal year for both new dredge construction, and overhaul and repair of existing dustpan dredges through completion of the modernization program?

General HEIBERG. Our modernization of the nonhopper dustpan fleet is currently underway. We have received Committee approvals for two dredges, the *Jadwin* conversion, and the replacement dustpan dredge. At this time we are evaluating future replacement requirements for the remaining plant. The Corps of Engineers Marine Engineering Board will be addressing this at the next semiannual meeting. The dustpan dredge *Jadwin* is being converted from steam to diesel, and we anticipate 12 to 15 years of operation before it would be replaced. The other two dustpan dredges, both of which are over 50 years old, will be replaced. One will be replaced with the new dustpan dredge currently under design. We plan to review our dustpan dredges capabilities after completion of the new dredge with a view toward initiation of a second replacement around 1990. I will provide for the record the schedule and budgetary requirements for the two dredges previously mentioned.

DUSTPAN DREDGE SCHEDULE

(In thousands of dollars)

	Thru fiscal year—					
	1985	1986	1987	1988	1989	Total cost
1. JADWIN Conversion[1]						
A. Design	700					700
B. Government furnished equipment	2,750	150				2,900
C. Construction		5,330				5,330
D. Contract management	100	100				100
Totals	3,450	5,580	....	....	....	9,030
2. Replacement Dustpan Dredge[2]						
A. Design	1,050	1,400				2,450
B. Construction		600	10,000	20,000	6,350	36,950
C. Contract management			100	200	100	400
Totals	1,050	2,000	10,100	20,200	6,450	39,800

[1] No new budget authority required.

[2] New budget authority required FY 86- FY 89.

SIDECASTER DREDGE

Chairman HATFIELD. Why will you be unable to initiate construction of the replacement sidecaster dredge during the current year as previously planned?

General HEIBERG. We have had a slippage in the design and concept review of the dredge. The concept plan for the dredges has now been completed and has been sent to the South Atlantic Division for review. Our original schedule had planned for detailed design to be completed and contract awarded for construction in the 4th quarter of fiscal year 1985. Our present schedule indicates contract award in the 3rd quarter of fiscal year 1986. Detail design will be done by contract, scheduled to be awarded this summer.

TOWBOAT "ANDREWS"

Chairman HATFIELD. The budget justification states that the towboat Andrews is "becoming increasingly uneconomical to operate." Explain this in more detail and provide specific information which supports the uneconomical operation.

General HEIBERG. The *MV Andrews* was built in the early 1950's as a test vessel for the Army Transportation Corps, Fort Eustis, VA, using a design which employs direct reversing engines. The engines are of non-current design, are fuel inefficient, no longer manufactured, and are near the end of their service life. Replacement or repair of parts are scarce and difficult to obtain. The direct reversing engine operation makes maneuvering in the vicinity of vital Corps structures a dangerous task to both vessels and structures. The hull skin plate, originally 5/16 of an inch thick (about 1/2 to 1/3 the conventional thickness) is now about 3/16 of an inch thick due to rust, corrosion and normal wear and tear. The 3/16 of an inch thickness is in jeopardy of being "holed" by drift, wood, etc.

Chairman HATFIELD. What will be the disposition of *M/V Andrews*?

General HEIBERG. The *MV Andrews* will be excessed using standard disposal procedures. Considering its condition and operational cost it would not be reutilized within the Corps of Engineers. If the vessel is not transferred to another Federal agency, it would be sold as surplus property.

Chairman HATFIELD. What specific operational and manpower savings can be expected?

General HEIBERG. First of all, the new vessel will provide safer operating procedures. It will have a modern propulsion system. The propulsion engines will be substantially more fuel efficient than the engines of the *Andrews*. There will be a savings of approximately one man-year since the replacement vessel will not require full-time attendance of an engineer in the engine room.

Chairman HATFIELD. How much of the $1.0 million request is to initiate construction?

General HEIBERG. This vessel is of similar design with the Nashville towboat which has already been advertised. We estimate at least $950,000 will be spent for construction costs and $50,000 for final design and contract administration.

DERRICK BOAT NO. 107—REPLACEMENT

Chairman HATFIELD. What is the current status of the replacement for Derrick Boat No. 107?

General HEIBERG. We anticipate provisional acceptance of the replacement derrick boat at the contractor's yard by the end of fiscal year 1985.

Chairman HATFIELD. The budget for 1986 includes $1.5 million to design and begin construction of a new derrick boat, which is estimated to cost around $4.0 million. Will this new vessel replace an existing derrick boat? If so, please provide specific information about the condition of the existing vessel.

General HEIBERG. This new derrick boat is a replacement for derrick boat No. 41, the *Bluestone*. The *Bluestone* was acquired in 1938 in conjunction with the construction of the Gallipolis Locks, Ohio River and Winfield Locks, Kanawha River. The *Bluestone* has a lifting capacity of 35 tons and the requested derrick boat would be capable of lifting 110 tons at a 50-foot radius. The present vessel is expensive to maintain and down time is excessive. Its annual utilization runs from 280 to 300 days per year depending on the frequency of unscheduled emergency repairs due to navigation accidents and equipment breakdowns.

Chairman HATFIELD. Why can't the derrick boat, which is currently under construction, be used to support operations at Gallipolis and Winfield locks and dams?

General HEIBERG. The only other derrick boat we currently have under construction is to be delivered to the St. Louis District later this year. Due to the fact that the primary use of both vessels is emergency maintenance and repair of locks and navigation structures, each vessel must remain within close proximity to the project it supports.

Chairman **HATFIELD.** Is a derrick boat currently stationed at either Gallipolis or Winfield? If not, why will one be required in the future?

General **HEIBERG.** A derrick boat is not needed full time at either project. The new derrick boat will be assigned to the Huntington District Repair Fleet as is the existing derrick boat *Bluestone*. The physical size of the Huntington District navigation system is such that the travel time to either Gallipolis or Winfield from any other structure or fleeting base within the District is less than 2 days.

Chairman **HATFIELD.** Is there capability in the private sector for this type of support?

General **HEIBERG.** Currently, there are no derrick boats in the private sector regularly working within adequate travel time of Gallipolis or Winfield that have the capacity to meet the operational requirements.

WATER RESOURCES BENEFITS

Chairman **HATFIELD.** Provide for the record an update of the economic benefits generated by Corps water resource projects nationwide.

General **HEIBERG.** Yes, sir.

[The information follows:]

TABULATION OF CORPS OF ENGINEERS PROJECT BENEFITS

The only cumulative record the Corps keeps of total benefits and cost allocation to a project purpose is flood control. Remaining costs are not segregated by project purpose. However, the following tabulation does provide quantitative benefits provided by completed projects in our investment program.

Flood control (billions:)		
Flood damages prevented through Fiscal Year 1984		146.3
Expenditures for flood control facilities	1/	19.5
Navigation (million tons:)-1982		
Coast harbors and channels		1,080.3
Great Lakes harbors and channels		122.5
Inland and intracoastal waterways		573.9
Total		1,776.7
Water supply: Gallons of water supply storage (billions)		2,520.0
Water quality control: Storage capacity (million acre-feet:)		2.3
Power:		
Installed capacity (million Kilowatts:)		19.4
Net generation (billion kilowatt-hours 1983)		88.2
Revenues (millions of dollars through fiscal year 1983)		4,398.4
Recreation: Recreation-days (millions)		481.0

1/ Represents total intital investment cost for flood control, including the amount allocated to flood control in multi-purpose power projects and the amount allocated to flood control in the Mississippi River and tributaries program.

FLOOD DAMAGES PREVENTED

(in billions of dollars)

Fiscal Year	Recorded
1975	15.9
1976	1.7
1977	2.6
1978	6.3
1979	19.4
1980	7.3
1981	1.2
1982	4.3
1983	23.2
1984	16.8
10-Year (1975-1984) Total	99.9
10-Year (1975-1984) Annual Average	10.0

HOW FLOOD DAMAGES PREVENTED ARE DETERMINED

Basically, flood damage estimates represent the difference in flood damages with and without the project. In the case of a flood control levee, the computation is done by projecting the river level over the land without the levee in place. In the project design stage, flood damage curves had been developed for representative zones along the length of the river banks protected by the project. The flood damage curves relate water surface levels to dollar damages incurred which are derived from historical flood loss records and field surveys of the flooded areas. In the example of the flood control levee, one can readily visualize the devastation that would result during severe flooding without the levee by observing water levels on both sides of the structure. The flood damages prevented by a reservoir project are not as obvious. Reservoir operation involves retaining volumes of water behind the dam until the flood threat to the downstream area eases. The releases from the reservoir are made at a gradual rate, when stream flows are below flood stages. The flood damages prevented by the reservoir are computed by comparing the damages that would have been incurred with and without the reservoir being in operation. All damage estimates at the end of each respective year are not adjusted for subsequent inflation. The Corps of Engineers does not include in its damage computation any quantitative value for human lives lost or injuries sustained during the floods. Statistics on loss of human life are reported separately.

TRANSPORTATION OF GOODS
TOTAL COMMERCE
(in millions)

	Totals	Coastal harbors and Channels	Great Lakes	Inland and Intracoastal
Tons:				
1982	1,777	1,080	123	574
1981	1,941	1,148	179	614
1980	1,999	1,194	176	629
1979	2,072	1,227	218	627
1978	2,018	1,180	214	624
1977	1,904	1,114	178	612
1976	1,832	1,027	197	608
1975	1,692	924	186	582
1974	1,743	947	197	599
1973	1,757	937	224	596
Ton Miles				
1982	964,900	684,000	62,800	218,100
1981	1,023,600	693,700	97,400	232,500
1980	1,016,100	691,700	95,400	229,000
1979	931,900	592,200	121,700	218,000
1978	928,000	599,000	118,000	211,000
1977	692,000	399,000	90,000	203,000
1976	677,000	374,000	105,000	198,000
1975	639,000	360,000	98,000	181,000
1974	656,000	367,000	105,000	184,000
1973	666,000	368,000	125,000	173,000
1972	670,000	383,000	108,000	179,000

PRINCIPAL COMMODITIES IN WATER BORNE COMMERCE - 1983-1982
(In percent)

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Petroleum & Products	44.0	42.6	44.3	46.5	48.7	49.1	45.3	43.6	42.1	43.0
Coal & coke	15.7	15.4	13.6	11.9	10.0	12.3	12.5	13.8	13.1	12.0
Iron ore, iron & steel	4.7	7.2	6.7	7.8	7.8	6.6	8.5	8.9	9.8	9.7
Sand gravel & stone	4.2	4.5	5.0	5.5	5.8	5.4	5.9	6.5	7.3	7.6
Grains	9.2	8.9	8.3	7.3	6.9	6.2	6.9	6.6	5.6	6.5
Logs & lumber	2.4	2.2	2.6	2.7	2.6	2.8	2.9	2.9	3.0	2.9
Chemicals	5.2	5.4	5.8	5.5	5.1	5.3	5.4	5.1	5.5	5.3
Seashells	0.4	0.4	0.5	0.4	0.5	0.6	0.7	0.9	1.0	1.1
All other commodities	14.2	13.4	13.2	12.4	12.6	11.7	11.9	11.7	12.6	11.9

WATER SUPPLY

The Corps of Engineers does not sell water; it can only provide storage space for use by state and local interests. Therefore, only the storage space we have under contract can be listed. Corps records are quite detailed for municipal an industrial storage, but very little information is available on irrigation and water quality. This is because contracts are signed for municipal and industrial use. The storage space for irrigation is turned over to the Department of Interior for administration, and the Corps has only a minor role in water quality storage since the enactment of Public Law 92-500. Therefore, with this modification to the request, the information is provided below.

(The information follows:)

WATER SUPPLY STORAGE

1. Water storage space under contract for Municipal and Industrial Uses.

Fiscal Year	Storage (acre-feet)	Water Stored (trillion gallons)
1974	5,309,000	1.73
1975	5,631,000	1.83
1976	5,765,600	1.88
1977	6,015,100	1.96
1978	6,167,200	2.01
1979	6,267,400	2.04
1980	7,398,200	2.41
1981	7,572,000	2.47
1982	7,648,500	2.49
1983	7,795,400	2.52

At the end of Fiscal Year 1983, there was 8,884,100 acre-feet of Municipal and Industrial water supply storage space in 111 Corps reservoir projects, 97 of which were operational. Of that total storage space 7,795,400 acre feet (87%) is under contract in 167 sparate agreements. The total storage space in Corps reservoir projects for M&I water supply represents an investment cost of $1.132 billion, of which $989 million (87%) is under contract.

2. Water Storage Space Provided For Irrigation.

Fiscal Year	Status	No. of Projects	Specific	Joint Use
1983	Under Constr.	3	0	1,640,000
	Completed	49	2,673,000	52,655,000

3. Water Storage Space Provided For Water Quality

Fiscal Year	Storage (Acre-Feet)
1982	2,300,000 1/

1/ Approximately.

RECREATION

Recreation Visitor Days for 1974-1983

(In millions of recreation days of use)

Calendar year:	
1974	352
1975	376
1976	391
1977	424
1978	439
1979	449
1980	457
1981	468
1982	480
1983	481

SMALL CONTINUING AUTHORITIES PROGRAM

Chairman **HATFIELD**. Please provide for the record a list which shows the Corps funding capability for fiscal 1986 for the Small Continuing Authorities Program.

General **HEIBERG**. Yes, we can provide that.

Small Continuing Authority Program capabilities for fiscal year 1986

Program	*Capability fiscal year 1986*
Section 205	$30,000,000
Section 103	4,500,000
Section 111	....
Section 14	10,000,000
Section 208	2,000,000
Section 107	10,000,000

QUESTIONS ON OREGON PROJECTS SUBMITTED BY CHAIRMAN HATFIELD

BONNEVILLE NAVIGATION LOCK

CHAIRMAN HATFIELD. Congress appropriated funds to continue "Continued Planning and Engineering" in FY 1985. What work will be accomplished with these funds?

General WALL. Sir, FY 1985 funds are being used to prepare plans and specifications for relocation of the UPRR railroad, adjustment of the Interstate Highway I-84 off ramp, and stabilization of slide zones. A portion of the funds also are being applied to completing remaining planning and engineering activities on lock hydraulic models and geotechnical studies.

CHAIRMAN HATFIELD. Do you have the ability to initiate construction in FY 1985? If so, what do you need from Congress to do so and what activities would you initiate.

General WALL. Sir, if the project is authorized and legislation is enacted that will provide for the collection of user fees for deposit in the Inland Waterways Trust Funds to be available to pay 70 percent of the costs of construction, then we would be able to initiate construction. Under these conditions and subject to the other usual constraints, we have a FY 1986 capability of $8 million to initiate construction.

CHAIRMAN HATFIELD. When would the project be completed, assuming a late FY 1985 construction start?

General WALL. Sir, the new lock would be completed and operational in 1991.

CHAIRMAN HATFIELD. Last year you stated the capacity of the present lock would be exceeded before 1990. Is that statement still correct?

General WALL. Sir, our most recent evaluations done in January 1981 in connection with the Supplemental Report of the Chief of Engineers indicate that lock capacity will be reached by 1990.

CHAIRMAN HATFIELD. Now, the justification material shows an $11.3 million cost increase to correct deficiencies in the fish guidance system. What is the nature of the problem, why was it not identified earlier, and why isn't the Corps moving more aggressively (funding wise) to correct the problem?

General WALL. Sir, development of intake screens to deflect juvenile anadromous fish from passing through turbines at our Lower Snake and Columbia River Dams has been underway for several years. The screens are performing with high efficiency at McNary Dam and at the Bonneville First Powerhouse. After the last power unit in the second powerhouse became operational in October 1982, we initiated tests of the turbine fish deflection screens to determine their guiding efficiencies. The first tests were conducted in the spring of 1983 when the juvenile fish were migrating downstream past the project. We found that the effectiveness of the screens were much lower than designed and that unacceptably high numbers of juvenile anadmorous fish were passed through the turbines.

We have been aggressively pursuing experimental methods and tests to determine ways to improve fish guidance of those screens. We have determined that the primary problems are associated with the geometry of the turbine intake, which is different than our other upstream powerhouses, and with the river currents as the juvenile fish approach the upstream area of Bonneville Second Powerhouse.

Based on prototype studies in 1983 and 1984, we have designed a test program for this spring which we believe will produce the desired fish guidance. Based upon those expected favorable results, we have established a construction schedule to correct the problems which is reflected in the $11.3 million cost increase. If our spring 1985 test program demonstrates the proposed modifications are effective, we will review current schedules and funding to assure aggressive corrections of the problems.

OREGON COASTAL PORTS, O&M

Chairman HATFIELD. Now, the President's budget identifies an Operation and Maintenance requirement Nationwide of about $1.316 billion, yet only $961 million in appropriations is requested to perform this annual O&M work. This amounts to a shortfall of $355 million which is to be covered by user fees. Mr. Dawson, have you examined the impact of such a change on the economy of Oregon?

Mr. DAWSON. Mr. Chairman, since the overall O&M program amounts were computed on the basis of national gross estimates for each category of beneficiary prior to the budget submission, we have not had an opportunity to develop a breakdown of Federal and non-Federal shares on a project, state, or regional basis. Therefore, at this time the impact of any O&M recovery on the Oregon economy is unknown. However, I would not expect this impact to be large in light of the limitation on the amount any port with more than 1 million tons of commerce annually would have to pay for Operation and Maintenance.

Chairman HATFIELD. What would be the net budgetary impact of such a change? (i.e., O&M savings versus increased welfare and unemployment payment)

Mr. DAWSON. User fees to fund a portion of the Operation and Maintenance program would utilize a segment of the monetary benefits gained by project users. I foresee no adverse effects of this proposal such as you suggest.

Chairman HATFIELD. Provide for the record an assessment of the impact on operational, employment, and related economic impact on the local area for each of the Oregon coastal ports and navigation projects.

Mr. DAWSON. Sir, such an assessment has never been performed for Oregon projects, or projects in any other state, and would require an extensive study effort. I have asked that General Wall and his staff accomplish the complex task of analyzing each individual project with regard to application of proposed cost sharing criteria and a listing will be furnished to the Committee when completed.

Chairman HATFIELD. General Wall, as the man closest to the day-to-day operations of these projects, can you give us an assessment of what would happen at the Oregon coastal ports if the non-Federal O&M contribution is not available.

General WALL. Mr. Chairman, it is our hope that this will not be the case, but if funds were not otherwise provided, the Oregon coastal ports would experience operational impacts similar to those across the nation. Quite frankly, we would be faced with a problem of doing only the most critical maintenance work. Whether some of the Oregon coastal ports would be seriously impacted would depend on nationwide considerations. I believe however in the event the contributions were not available, that we would be able as I previously stated, to work with the Congress to arrive at an appropriate action or alternative.

Chairman HATFIELD. Also provide for the record a breakout of the annual O&M requirement in the FY 1986 budget in terms of Federal and non-Federal contribution for each Oregon navigation project.

General WALL. Mr. Chairman, since the overall O&M program amounts were computed on the basis of national gross estimates for each category of beneficiary prior to the budget submission, we have not had an opportunity to develop a breakdown of Federal and non-Federal shares on a project by project or regional basis. Therefore, at this time, the information you request is not yet available.

Chairman HATFIELD. Would the O&M requirement be any different without user fees?

General WALL. No, Sir. The O&M requirement reflected in our program request is based upon our best assesment of project and activity needs without regard to source of funding.

ELK CREEK LAKE

CHAIRMAN HATFIELD. Congress appropriated $10.0 million for 1985 to resume construction of Elk Creek Lake Dam. I am pleased to see that the President's 1986 budget includes $4.0 million to continue project construction activities. How does the Corps plan to use the funds appropriated for the current year and the $4.0 million for fiscal 1986?

General WALL. Sir, these funds will be used to continue road and utility relocations.

CHAIRMAN HATFIELD. What will be required in terms of dollars or direction, to assure that the main dam contract is awarded in fiscal 1986?

General WALL. Sir, the Corps will comply with any directive to award the main dam contract that is enacted into law as long as sufficient funds are also made available

INFLATION COST

CHAIRMAN HATFIELD. I note that the project cost has decreased from $124 million to $117 million - a $7.0 million adjustment for lower inflation expected through the construction period. What rate of inflation was used to calculate the inflation cost for FY 1986? Provide the assumed inflation rates by year through the construction period.

General WALL. Sir, I will provide for the record the assumed inflation rates used for cost estimates developed for budget years FY 1985 and FY 1986.

[The information follows:]

Percentage Annual Price Change

	1 Oct 83-84	84-85	85-86	86-87	87-88	88-89
Construction						
FY 1985	7.0	8.0	8.0	8.0	8.0	8.0
FY 1986	4.8	6.0	6.0	6.0	7.0	7.0
Government Costs						
FY 1985	0.0	5.0	5.0	5.0	5.0	5.0
FY 1986	2.6	3.0	5.0	5.0	5.0	5.0

The $124 million estimate was based on a normal construction schedule for the whole project beginning in FY 1985. The $7.0 million decrease is primarily due to deletion of future inflation for the unscheduled work in the FY 1986 program. All construction except for relocations is now unscheduled.

CHAIRMAN HATFIELD. How do the inflation rates compare to rates expected by the construction industry?

General WALL. Sir, these estimates of future inflation rates reflect our judgment of rates expected by the construction industry.

CHAIRMAN HATFIELD. You have received construction funds in FY 1985, what are you doing with these funds?

General WALL. Sir, these funds are being allocated for relocation of roads and utilities and for engineering and design.

CHAIRMAN HATFIELD. What is your funding ability for this project in FY 1986?

General WALL. Sir, subject to the usual constraints our FY 1986 capability is the same as the budget request, $4 million to continue relocations.

CHAIRMAN HATFIELD. Is there strong local support for this project?

General WALL. Local interest in the Elk Creek project remains at a high level as it has since the Corps' initial public meeting on the project in 1956. Citizens favoring the project are principally represented in the area by the Rogue River Basin Flood Control and Water Resources Association. This organization maintains a very high profile in the southern Oregon area and consists of about 85 local associate member organizations.

MT. ST. HELENS AND VICINITY

CHAIRMAN HATFIELD. What is the status of the Feasibility Report that was originally promised to Congress in the March-April 1985 time period?

General HEIBERG. The final Feasibility Study and Environmental Impact Statement has been published and are being reviewed by Governors and Federal Agency heads. Ninety-day review is scheduled to end on 11 April 1985. The Corps is scheduled to forward the report to the Assistant Secretary of the Army (ASA)(CW) by 30 April 1985. After appropriate administration review, including OMB, report could be forwarded to Congress.

CHAIRMAN HATFIELD. What are the recommendations of the Feasibility Report?

General HEIBERG. The Feasibility Report recommends that the Corps of Engineers be given authority to construct either a Single-Staged Sediment Retention Structure (SRS), multi-stage SRS, or continued dredging.

CHAIRMAN HATFIELD. What process will be followed and who will be making the decision on what will be built and when?

General HEIBERG. The Corps of Engineers will be perfecting their sediment prediction and design, cost estimates and benefit evaluation for the three alternatives contained in the Feasibility Report recommendations during the spring and summer. A summary report of this information will be transmitted to ASA by mid-September 1985 and the ASA will make the decision on which alternative to construct by mid-October 1985.

CHAIRMAN HATFIELD. When must Congress provide project authorization in order not to delay construction of a solution to the problem?

General HEIBERG. Congress needs to act on project authorization by 1 October 1985 in order not to delay the construction schedule as provided Members of Congress by Mr. Gianelli, then-Asst. Secretary of the Army (Civil Works).

Chairman HATFIELD. During public review of earlier reports, much discussion centered around local cost sharing that was being proposed. Will you please discuss this item for us?

General HEIBERG. The cost sharing proposed in the Feasibility Study is similar to the a, b, c's of a traditional local protection type project. As currently proposed, the local share amounts to about $17 million or 6 percent of project costs. Additionally, local interests would be required to operate and maintain Federally implemented mitigation measures and exempt the Federal Government from payment of Washington State sales tax.

Chairman HATFIELD. What is the Corps Fiscal 1986 capability on this project and what would it be used for?

General HEIBERG. Our FY 1986 capability for this project is the same as the budget request of $500,000 to complete CP&E. Until such time as the report is complete and has been reviewed by ASA(CW) and others in the Administration and ASA(CW) makes a recommendation to the Congress for authorization, it would not be appropriate to express a capability for construction.

Chairman HATFIELD. What would be the steps necessary in order to improve the above schedule?

General HEIBERG. It is very unlikely that any permanent solution could be implemented any sooner than presently scheduled.

Chairman HATFIELD. Why is the dredging option still being pursued?

General HEIBERG. The dredging option is being carried forward to reflect the uncertainty associated with predicting sediment movement based on only three years of sediment monitoring. Continuing to carry this option thru CP&E allows for early implementation should updated information suggest that continued dredging is the least costly alternative.

CHAIRMAN HATFIELD. What are the opinions of the other agencies and experts involved with the Mount St. Helens problem as they relate to the Corps' predictions and recommendations contained in the Feasibility Report?

General HEIBERG. U.S.G.S. and other experts the Corps has consulted have expressed support for construction of a Single Retention Structure. The basis for this support is a belief that the Single Retention Structure provides the best technical flexibility for handling large movements of material that may occur during rare storm events in the near future. However, these experts and USGS have not reviewed the full costs and benefits of the various alternatives so their views do not reflect the full range of concerns that must be part of any final decision. The USGS has noted that there remains much uncertainty about the Mount St. Helens situation. Toward that end, they expect scientific breakthroughs "that will permit more realistic simulation of erosion of the North Fork Toutle debris avalanche and downstream sediment transport are likely over the next several years. Until that time some divergent opinions will likely persist concerning precise erosion problems, sediment sorting and armoring processes, rates of sediment transport, and downstream channel adjustments."

CHAIRMAN HATFIELD. The budget justification for the Mount St. Helens flood control project indicates that the allocation for FY 1986 represents a "minimum program" and that additional funding may be required to provide 100-year temporary necessary flood protection. On what basis does the Corps determine the sediment load in the Cowlitz and Toutle Rivers?

General WALL. The Portland District maintains an active sediment and flood monitoring program in conjunction with their interim dredging work. The sediment monitoring program is based on field measurements of sediment deposition in the lower Toutle and Cowlitz Rivers. The surveys are conducted periodically throughout the winter months and additional surveys are made following any significant storm or flood event. As new sediment deposits are detected which reduce channel capacity and raise flood risks, they are removed by the dredging program. Events which exceed normal hydrology may increase sediment deposition to levels causing a need for additional funding to remove them.

CHAIRMAN HATFIELD. How have actual sediment deposits compared to the Corps' estimates over the last several years?

General WALL. The Comprehensive Plan sediment analysis estimated 1 billion cubic yards of sediment erosion over 50 years with an initial rate of 50 million cubic yards a year. Using the latest sediment monitoring data, a revised sediment analysis in 1984 estimates 750 million cubic yards of total erosion with initial erosion rates of 28 million cubic yards a year.

CHAIRMAN HATFIELD. If dredging funds are insufficient, will the Administration request additional appropriations to make up the shortfall?

General WALL. Sir, if there is a requirement exceeding the budgeted amount, we will examine the total funds available to the Corps' construction program and recommend an appropriate reprogramming of available funds. In the event there are not sufficient funds available in the construction program, we would recommend to ASA(CW) that we seek supplemental appropriations.

CHAIRMAN HATFIELD. The Committee has received information which indicates that sediment volumes have declined significantly. Is this the case? If it is, should we reanalyze the need for a Single Retention Structure?

General WALL. Although sediment volumes measured in water years 1982/83 and 83/84, and, so far this water year 84/85, have been below our forecasts for those years, our sediment projections are based on average annual hydrologic sequences, and storm magnitude and runoff in these periods have been below normal. The decline in sediment volumes are not considered significant, because our sediment models predict that yields will be low in periods of low hydrologic runoff and will be higher in years of above average hydrology. We have not detected any physical changes in the basin to indicate that total sediment estimates should be revised. However, we are continuing our analysis of this uncertain sediment deposition process as well as an analysis of benefits and costs of alternatives. If this new analysis provides compelling and convincing reasons, the selection of another alternative, such as a staged single retention structure or dredging, such an alternative may be recommended.

BONNEVILLE SECOND POWERHOUSE

CHAIRMAN HATFIELD. Last year, the Congress gave the Corps of Engineers authority and $8.5 million in P. L. 98-396 to purchase up to 1,000 acres of land to mitigate the fish and wildlife impact of the Bonneville Second Powerhouse project. That legislation was signed into law on August 22, 1984. General Wall, what has the Corps of Engineers done since August 1984 to carry out the law? How do you plan to proceed in the remainder of 1985 and fiscal 1986 to carry out the law and Congressional intent?

General WALL. Sir, the Portland District and North Pacific Division office have been moving forward effectively to acquire and develop the lands as mitigation for the Bonneville projects as indicated in P. L. 98-396. Our FY 1985 activities include coordination with representatives of the Washington State Department of Game, U. S. Fish and Wildlife Service and the development of schedules of specific actions needed to complete land acqusition, development and turn-over to the U. S. Fish and Wildlife Service for management.

We expect to initiate acquisition and development of the lands as rapidly as possible within the context of PL 98-396. Our specific activities will include acquiring the land and diverting Gibbons Creek to develop the habitat that will fully mitigate impacts of the Bonneville projects.

CHAIRMAN HATFIELD. The budget request includes $2,145,000 to continue work on fish and wildlife facilities. This is about half the amount you expect to spend during the current year. Why has the priority and effort related to fish and wildlife been reduced for 1986?

General WALL. Sir, the current year program includes the purchase of spare turbine fish deflector screens and parts and payment of the fish and wildlife facilities portion of the Washington State sales and use tax which was due. These essentially one-time costs comprise more than half of the FY 1985 program. In FY 1986, we will continue to give emphasis to investigations of the juvenile fish guidance efficiency problem at the second powerhouse. Our priority for fish and wildlife research remains high and the requested amount will allow for continuation of needed work on a no delay schedule.

WILLAMETTE RIVER BANK PROTECTION (MINTO-BROWN)

CHAIRMAN HATFIELD. What is the current status of the bank protection work in the Minto-Brown area, which is part of the Willamette River Bank Protection project?

General WALL. Sir, our engineering and design for placing approximately 3,650 linear feet of riprap in the Minto-Brown area is nearing completion. We plan to initiate and complete construction of this work this fiscal year.

CHAIRMAN HATFIELD. The 1986 budget for the Willamette Bank Protection project reflects a reduction of $700,000 in the 1985 allocation for savings and slippage. Will this have any impact on the Minto-Brown protection work?

General WALL. No, Sir. The Minto-Brown work will be completed with available funds.

CHAIRMAN HATFIELD. Construction on this bank protection project was initiated in 1938, almost 50 years ago. Can you provide for the record a list of the remaining sites to be undertaken and funding schedule by site through completion?

General WALL. Yes, Sir. I will provide that for the record.

[The information follows:]

Sites	FY 1985	FY 1986	FY 1987	FY 1988
Bass Phase II Drift Barrier	130,000	-	-	-
Bass Phase II Extension	-	130,000	-	-
East Independence Bridge	-	115,000	-	-
Minto-Brown	1,700,000	-	-	-
Serres-Mag Revegetation	20,000	-	-	-
Cannon Revegetation	10,000	-	-	-
Second Lake	-	950,000	-	-
Future Locations	-	-	1,900,000	1,928,000

Remedial work at 47 "Future Locations" has been identified as justifiable during past river reach studies. Past experience indicates that serious erosion at many of these sites, and at other sites in unstudied reaches, is likely to develop in the future, because bank erosion problems at these sites are volatile and often develop quickly, remedial work by specific location has not been scheduled beyond FY 1986. This program will permit us to respond promptly to critical erosion as it develops.

LOWER SNAKE RIVER FISH AND WILDLIFE COMPENSATION, WASHINGTON AND OREGON

CHAIRMAN HATFIELD. I note that the allocation for the Lower Snake River Fish and Wildlife compensation for fiscal 1985 is $15.4 million, which is $2.3 million below the conference allowance for 1985. With this in mind and realizing that the 1986 request is $3.4 million lower than the current year, will you explain how the completion schedules for the last three hatcheries can be held almost unchanged?

General WALL. Sir, $2,200,000 reduction assigned as savings and slippage and transfer of $70,000 from the project during FY 1985 was provided due primarily to a favorable bid on the Irrigon Hatchery contract. Because of other additional slippages, primarily in the Magic Valley Hatchery, another $2,330,000 will be surplus to FY 1985 requirements. These funds will be carried over into FY 1986 which will provide a total of $14,330,000 for obligation during FY 1986, compared with a projected obligation of $13,101,000 in FY 1985.

QUESTIONS SUBMITTED BY SENATOR COCHRAN

YAZOO BACKWATER PROJECT

Question. What is the current status of expenditures of funds previously appropriated for construction of the Yazoo Backwater Project (MR&T), and for what specific purposes would the $2.7 million request in the FY 1986 budget for this project be used?

Answer. The $2.7 million requested for the Yazoo Backwater feature includes $2 million for engineering and design on the Yazoo Backwater Pumping Plant and $700,000 which will be used for continuation of construction on pump stations at the Greentree Reservoirs.

The $2 million for engineering and design of the pumping plant will enable us to complete Feature Design Memoranda and continue the preparation of plans and specifications.

As you are probably aware, the total cost of the Yazoo Backwater Pumping Plant is currently estimated to be in excess of $180 million and represents a major commitment of Federal funds. To be sure, the problem addresses a severe flood problem, as do many other projects throughout the nation. This pumping plant inevitably must compete for the limited construction funds in the President's budget. Completion of the General Design Memorandum in late FY 1985 will permit comparison of the merits of the Yazoo Backwater Pumping Plant with other proposed new work. The Army believes this procedure assures all projects and new work items, including the Yazoo Backwater Pumping Plant, equitable consideration in the budget process. A decision to initiate construction will be made after review of the General Design Memorandum. If the decision is favorable, a construction schedule will then be developed.

Question. What is the Corps' FY 1986 capability for this project?

Answer. The Corp's FY 1986 capability is $2.7 million. Engineering and Design efforts on the Yazoo Backwater Pumping Plant are being conducted at an expedited pace, and additional funds could not be used to further accelerate design activities. Pending a decision to initiate construction and development of a construction schedule, we could not use additional funds for construction or procurement activities.

QUESTIONS SUBMITTED BY SENATOR DOMENICI

FUTURE FUNDING WITHOUT NEW STARTS

Question. What are the estimated and projected needs for general investigations, construction, O&M and MR&T appropriations for FY 1986 through 1988 if Congress continues not to fund new construction starts?

Answer. For that period the requests for General Investigations, Operations and Maintenance, General and Flood Control, Mississippi River and Tributaries would be substantially the same without new construction starts. The request for Construction, General would drop by the actual amount we have scheduled for the 29 new starts in Fiscal Year 1986 as well as by the programmatic projection for future new starts. The projected request without new construction starts based on program pro[illegible]tions in the OMB multi-year planning system is as follows:

THREE YEAR PROJECTION WITHOUT NEW CONSTRUCTION STARTS
(IN MILLIONS $)

APPROPRIATION TITLE	FY 1986	FY 1987	FY 1988
General Investigations	119	131	131
Construction, General	797	707	722
Operations and Maintenance, General	961	845	877
Flood Control, Mississippi River & Tributaries	269	277	284

PROPOSED COST SHARING

Question. Will the administration's proposed legislation require greater non-Federal cost sharing for general investigation and survey activities and for non-navigation related work (for example, flood control)?

Answer. Yes, the administration's proposed legislation would require greater non-Federal cost sharing. I will submit tables showing the proposed non-Federal share.

Department of Army's Proposed Legislation

COST RECOVERY PROPOSALS FOR EXISTING NAVIGATION PROJECTS

INLAND NAVIGATION CHANNELS AND LOCKS	A systemwide 1.5 mill per ton-mile user fee to pay approximately 70 percent of future operation and maintenance and the costs of new construction projects.
SHALLOW DRAFT PORTS AND HARBORS (including channels 14 feet or less in depth that are not part of the inland waterway system) and DEEP DRAFT PORTS WITH LESS THAN 1 MILLION TONS OF COMMERCE ANNUALLY.	Non-Federal project sponsors pay 70 percent of operation and maintenance costs, and may recover their costs through user fees.

DEEP DRAFT PORTS WITH MORE THAN 1 MILLION TONS OF COMMERCE ANNUALLY	Non-Federal project sponsors pay actual costs of operation and maintenance up to an amount equal to 125 percent of the average cost per ton of commerce loaded or unloaded at ports throughout the nation. All costs over the "cap" amount are borne by the Federal Government. Sponsor may recover its costs through user fees.

DEPARTMENT OF ARMY'S PROPOSED LEGISLATION NON-FEDERAL COST SHARING REQUIREMENTS FOR NEW PROJECTS

OUTPUT	IMPLEMENTATION %	O AND M %
MUNICIPAL AND INDUSTRIAL WATER SUPPLY	100	100
HYDROELECTRIC POWER	100	100
FISH AND WILDLIFE ENHANCEMENT	100	100
DEEP DRAFT (>45') HARBOR	100*	100**
DEEP DRAFT (>14',<or=45') HARBOR, WITH ANNUAL TONNAGE OF >1 MILLION	70*	100**
INLAND NAVIGATION	≈70***	≈70***
SHALLOW DRAFT (<or=14') HARBORS AND DEEP DRAFT HARBORS WITH ANNUAL TONNAGE <1 MILLION	70	70
RECREATION	50	100
AQUATIC PLANT CONTROL	50	100
FLOOD, HURRICANE AND STORM DAMAGE REDUCTION	35	100
AGRICULTURAL WATER SUPPLY	35	100

IT SHOULD BE NOTED THAT THE COSTS OF BEACH EROSION, FISH AND WILDLIFE MITIGATION AND WATER QUALITY PROJECTS WILL BE ASSIGNED TO THE OUTPUTS (BENEFITS) LISTED AND COST SHARED ACCORDINGLY THE FURTHER PROVISION THAT ANY COSTS OF BEACH EROSION ALLOCATED TO PREVENTION OF LAND LOSS WOULD BE A NON FEDERAL RESPONSIBILITY.

* The cost of providing lands, easements, rights-of-way, relocations, and dredged material disposal areas (a non-Federal responsibility) allocated to initial deepening is included in non-Federal share of project implementation costs.

** Project sponsors would pay 100 percent of O&M costs up to an amount equal to 125 percent of the average cost per ton of commerce loaded or unloaded at the nation's ports.

*** Approximately 70 percent of new project implementation and system's operation and maintenance costs would be financed on a pay-as-you-go basis from the receipts of a systemwide 1.5 mill ton-mile fee. This fee would be in addition to the existing fuel tax.

DEPARTMENT OF ARMY'S PROPOSED LEGISLATION

NEW PROJECT CONSTRUCTION

TIMING OF NON-FEDERAL FINANCIAL CONTRIBUTIONS

THE NON-FEDERAL SHARE OF IMPLEMENTATION COST IS TO BE IN CASH OR IN-KIND DURING CONSTRUCTION OF THE PROJECT EXCEPT THAT NON-FEDERAL CONTRIBUTIONS FOR FLOOD DAMAGE REDUCTION, HURRICANE AND STORM DAMAGE REDUCTION, RECREATION, AND AGRICULTURAL WATER SUPPLY ARE TO BE CONSISTENT WITH THE ABILITY OF THE NON-FEDERAL INTEREST TO PAY AT THE TIME PROJECT EXPENDITURES ARE MADE.

THE ABILITY OF ANY NON-FEDERAL INTEREST TO PAY SHALL BE DETERMINED BY THE SECRETARY IN ACCORDANCE WITH PROCEEDURES ESTABLISHED BY THE SECRETARY.

THE PORTION OF THE NON-FEDERAL CONTRIBUTION NOT CONTRIBUTED DURING CONSTRUCTION MAY BE REPAID OVER THE USEFUL LIFE OF THE PROJECT BUT IN NO EVENT MORE THAN 50 YEARS FROM THE DATE OF PROJECT COMPLETION. THE INTEREST RATE CHARGED WILL REFLECT THE AVERAGE YIELDS ON OBLIGATIONS OF THE UNITED STATES WITH REMAINING PERIODS TO MATURITY COMPARABLE TO THE REIMBURSEMENT PERIOD. (When a Federal loan is used to finance a portion of the non-Federal cost share of a project, the interest rate charged will reflect the actual cost of Federal borrowing.)

CONSTRUCTION AND O&M EXPENDITURES

Question. What were the FY 1984 expenditures for construction and O&M for inland waterways, shallow and deep draft harbors, and recreation facilities? What are your estimates for FY 1985 and 1986?

Answer. Expenditures for construction and operation and maintenance are provided below:

	FY 1984	FY 1985	FY 1986
	($ in millions)		
Construction, General			
Inland Waterways	269.9	263.3	171.8
Harbors	88.9	110.9	101.4
Recreation Facilities	33.2	46.8	44.8
Construction, MR&T			
Inland Waterways	0	0	0
Recreation Facilities	0	0.4	0
Operation and Maintenance, General 1/			
Inland Waterways	269.0	280.0	288.1
Harbors	497.2	441.4	449.4
Recreation Facilities	133.5	125.4	142.6
MR&T, Maintenance 1/			
Inland Waterways	27.4	19.7	21.0
Recreation Facilities	5.7	4.3	5.3

1/ FY 1986 amounts include both Federal and Non-Federal funds.

USER CHARGES

Question. Am I correct that the following sums are assumed in the budget to be received from new user charges on the Corps program to offset some of the spending you have requested:

a) $160 million in inland water operations and maintenance fees;

b) $195 million in deep-draft operations and maintenance fees;

c) $33 million in fees as a result of construction and maintenance of the Mississippi river and Tributaries project;

d) $12 million in new deep-water construction work; and

e) $3 million toward the cost of one new inland waterway project?

If those are the correct figures, what is your view on the level of appropriations for the overall Corps program if that $403 million is not made available through new user charges?

Answer. If the $403 million is not available there would have to be a serious reconsideration of the FY 1986 Civil Works program level and the distribution of funds. However, that is a decision which would have to be addressed based on the FY 1986 budgetary situation at the time it becomes clear that the user fees will not be able to contribute a reasonable share to the cost of the ports and waterways. I am as reluctant to speculate about the likelihood of future events, as I am confident that together, the Administration and Congress, would take appropriate action to assure that the priority operation, maintenance and construction activities occur. I do not think it would be wise to rule out consideration at the proper time of any appropriate alternative. Whatever the case may be, I am pledged to work closely with both Appropriations Subcommittees.

ALAMOGORDO, NEW MEXICO

Question. Would you please provide me with information on the Alamogordo Flood Control project. This project has been inactive for some time. As I understand, the city wants to revive the project and has agreed to new cost-sharing arrangements. How much FY 1986 money could the Corps spend to move forward with the project engineering?

Answer. The authorized project consists of a diversion channel, approximately 7.0 miles in length, located east of the Alamogordo, NM, city limits. On 2 April 1982, the City of Alamogordo provided us a formal assurance of intent and on 27 July 1982, the City Council passed a resolution expressing their project support and will agree to financially participate. Thus, on 24 September 1982, the project was reclassified from the "deferred" to the "active" status. Subject to the usual qualifications, the capability for FY 1986 is $450,000 for the Alamogordo, NM project. These funds would be used to resume Advance Engineering and Design efforts.

Question. Will that money require a cost-sharing agreement, or can it be spent prior to a local cost-sharing agreement?

Answer. There is no requirement for a cost-sharing agreement for the accomplishment of advance Engineering and Design studies.

Question. When could the project be ready for construction?

Answer. Approximately three years after receipt of Advance Engineering and Design funds.

QUESTIONS SUBMITTED BY SENATOR BYRD

BLUE STONE DAM--DEBRIS

Senator BYRD. During the year, a substantial amount of debris, floating logs and other matter is trapped by the Blue Stone Dam. As I understand it, the Corps' practice is to dislodge this debris each spring and pass it over the top of the dam where it subsequently floats through the New River Gorge National River which is a spectacular scenic attraction. Clearly, this debris detracts from the appearance of the river even though most of the material is contributed by natural causes.

Would you please indicate whether it is feasible to remove this debris from the Blue Stone Reservoir and dispose of it either in a landfill or through some other method? If it is feasible to dispose of this debris, would you please indicate what the total annual cost would be for this operation and identify separately any initial start-up costs for equipment and other devices necessary for a clean-up program? In developing your response, could you also coordinate with the National Park Service headquarters for the New River Gorge so that any related National Park concerns may be included in your report?

General HEIBERG. This question has been raised numerous times in the past. Simply stated, such a debris removal program is not feasible. Steep banks along both sides of the lake upstream of the dam preclude construction of a road to the lake. If a trash boom were to be utilized, it would have to be located so far upstream from the dam that a significant portion of the lake surface could not be used for recreational purposes. Configuration of the top of the dam prevents access of trucks or truck cranes. It should be noted that we do not pass debris over the top of the dam. Debris is passed through the sluice gates. Because removal of debris is not feasible, we have not coordinated this response with tha National Park Service.

COMMERCIAL ACTIVITIES AND EFFICIENCY REVIEWS

Senator BYRD. How many Commercial Activity (CA) studies and Efficiency Reviews (ERs) are you scheduled to perform in the next few years?

General HEIBERG. We are still determining the total number of studies and reviews we can expect to complete. We cannot make an accurate prediction of this number because we are encouraging consolidation of studies. The consolidation effort would result in our scheduling fewer studies covering a larger number of people, instead of conducting several smaller studies covering fewer people pr study. The significant factor is the number of full-time equivalents (FTE) studied rather than the number of studies. The Office of Management and Budget has stated that 2,000 spaces are to the studied by the Corps in FY 85; 4,000 in FY 86; 6,000 in FY 87; and 2,000 in FY 88. These figures are guides which we are using as we develop our number of planned studies over the next few years.

Senator BYRD. How many FTE reductions have you taken in the past few years?

General HEIBERG. We have had a reduction of 3776 FTEs between FY 1982 and FY 1986.

Senator BYRD. How many of these FTE reductions have been the result of management efficiencies?

General HEIBERG. Management efficiencies including Commercial Activities, consolidation of support services such as finance and accounting offices and personnel offices, closure of printing plants, dredge shutdowns, and similar efforts have saved 521 FTEs since FY 1982.

Senator BYRD. How many more FTE reductions can you anticipate as a result of the studies and Efficiency Reviews you have scheduled over the next few years?

General HEIBERG. The most current projection by the Office of Management and Budget anticipates a FY86 FTE reduction of 194, an FY87 reduction of 531, an FY88 reduction in FTE of 869, a reduction in FY89 of 506 FTE, and an FY90 FTE reduction of 207 for a total reduction of 2,307 FTE.

QUESTIONS SUBMITTED BY SENATOR HOLLINGS

LAKE TEXOMA, TEXAS

Question. I understand that 72,600 acre-feet of water in Lake Texoma, Texas, have been reallocated from Hydropower water storage to municipal, industrial or agricultural water use storage; and that you have before you an application, referred by the local Corps of Engineers, for reallocation of another 75,000 acre-feet from hydro storage for water use storage.

With respect to the pending application:

What is the current status?

Under what legal authority would you act on such an application?

What is the impact of this reallocation on recreation in Lake Texoma?

What is the impact on hydropower output?

Answer. We have not yet reallocated the 75,000 acre-feet of hydropower to water supply. We are considering a draft proposal to reallocate storage under authority of the Water Supply Act of 1958 (PL 85-500). The impact on recreation usage would be negligible. The impact on existing hydropower benefits would be outweighed greatly by the water supply benefits to be gained. Hydropower production, in terms of kilowatt-hours, would be reduced by less than 4 percent. There would be no reduction in dependable capacity. Reallocation could, however, have a significant impact upon potential future additions of hydropower.

Question. If 150,000 acre-feet of Lake Texoma water is reallocated to water use in Lake Texoma does that automatically mean that an additional 150,000 acre-feet must be reallocated to the state of Oklahoma under the terms of the Red River compact? If so, would that occur by regulatory action, would it automatically occur, or would it require legislative action? Have you measured the impact of a reallocation of 300,000 acre-feet upon the hydropower project purpose?

Answer. There is no automatic reallocation of Lake Texoma storage under the terms of the Red River Compact. The Compact does provide Oklahoma and Texas equal rights to the total storage in Lake Texoma. A request for a storage reallocation would be considered including an evaluation of the impacts on the authorized project purposes. No request for a water supply storage reallocation has been received from Oklahoma; and the Corps has not been made aware of any significant future needs or demands which would prompt a request for an allocation to the State of Oklahoma. Therefore, the Corps has not evaluated any potential, distant future impacts.

Question. A 1981 Corps of Engineers restudy of the project purposes of Lake Texoma included an analysis of placing two additional turbines on Denison Dam. To what extent have you taken into account the impact of this reallocation on the feasibility of those additional generating units?

Answer. It is clear that the proposed reallocation would have a negative effect on the feasibility of additional generating units at Denison Dam. This impact is one of the many factors that is being considered explicitly in the review of the reallocation proposal.

Question. What provision has been made to assure that all affected parties will have a reasonable opportunity to comment on this application before any application is granted either by your office or by the Chief of Engineers?

Answer. We have met with representatives of the North Texas Municipal Water District, Tex-La Electric Cooperative, Rayburn County Electric Cooperative, Southwestern Power Administration, and concerned congressional representatives in conjunction with review of the reallocation proposal and proposed draft water supply contract. We will continue to ensure that the views of all affected parties are considered as we proceed through the review process, including possible future consideration of a final water supply contract.

QUESTIONS SUBMITTED BY SENATOR SASSER

USER FEES

Question. The Corps proposes legislation to create a user fee to cover about 70 percent of the annual operating costs of inland waterways. How did the Administration arrive at the figure of 70 percent? Is this an arbitrary figure or does it reflect the results of a study of the amount which local users and sponsors would be willing to pay?

Answer. The 70 percent figure is a compromise from the principle of full cost recovery for inland waterways in the interest of expeditious budgetary relief.

Question. Have any studies been undertaken by the corps which document the potential impact on local economies of the proposal to institute user fees?

Answer. The Departments of Transportation and Commerce completed and sent to Congress a definitive study of the impacts of inland navigation cost from a variety of perspectives. This study, "The Section 205 Study," contains a wealth of information and has provided useful insights into the merits of the uniform system-wide fee we are proposing as opposed to a segment-specific approach to cost recovery.

NEW CONSTRUCTION STARTS

Question. The Corps is proposing several new construction starts in the FY 1986 budget request. Does the request reflect the Administration's proposed cost sharing initiatives?

Answer. Each project reflects the Administrations proposed cost sharing at the time the letter of intent was received from the local sponsor. We have not gone back and altered the cost sharing where our policy has subsequently changed. Each sponsor has agreed with us that if subsequent legislation is passed, the cost sharing will be adjusted to agree with the new legislation.

Question. In each new construction start which has been recommended, has the Corps consulted with the local sponsors to assure that they will be willing or able to finance the new amount of cost sharing which is being proposed?

Answer. With the exception of Gallipolis Lock and Dam which does not require a local sponsor, all project sponsors were individually contacted and have furnished letters of intent. Unless the sponsor raised a question about the ability to finance, we have assumed that the letter of intent applies to ability as well as willingness. For those sponsors who expressed a doubt as to their ability, we worked with them to analyze their capabilities to finance the work. In every case but one, the ability was present. The one exception was Tamaqua, PA. We have worked out repayment period which extends beyond the construction period for this sponsor, which enabled Tamaqua to participate.

SECTION 221

Question. Section 221 of Public Law 91-611 prohibits the Corps from initiating construction on any water project until the non-Federal sponsor agrees in writing to be responsible for its share of funding for the project.

Many state constitutions prohibit state legislatures from binding future revenue. Therefore, a provision in S. 366, currently pending before the Public Works Committee, would amend Section 221 to allow states to enter into contracts with the Corps without necessarily binding future appropriations.

The problem remains, however, that many projects are sponsored by entities other than states. Many other type public bodies, such as cities and counties, are the sponsors of Corps projects. Several projects in Tennessee, Kentucky, Mississippi, and Arkansas, for instance, are sponsored by political subdivisions of states.

Therefore, the language embodied in S. 366 would not remedy the impediment to the construction of these projects. Additional language is needed which would apply to states and other political subdivisions as well.

I am proposing language to the Public Works Committee which would remedy this situation. Does the Corps support the clarifying language of Section 221 which would clear up the problem presented by Section 221 for states and other political subdivisions?

Answer. Your statement is correct Senator Sasser. The language you refer to in S. 366 applies to states alone.

The Administration Omnibus Bill contains a provision that is similar in concept to S. 366. It, too, applies to states alone. We believe that it removes the primary technical impediment to construction and yet preserves the original concept of protection to the Government envisioned in Section 221. Any separate problems with respect to political subdivision of states might be avoided through flexible contract arrangements. For example, construction might proceed under a three party contract whereby the state stands as the insurer of the obligations of the political subdivision of the state under the project authorization.

In keeping with established policy, we would be pleased to comment on your proposed language after its introduction and upon the request of the Chairman of the Committee to which the language is referred. Our comment on the merits of the proposal would, of course, have to be coordinated with the Administration.

TIPTONVILLE, TENNESSEE

Question. The House Public Works Committee has approved a resolution authorizing a study of the flooding problems which exist in the area around Tiptonville, Tennessee. Flooding from the Mississippi River has been a severe problem in this area for years.

Provide for the record a Fact Sheet outlining the details of this study and provide us with the Corps' capability for this project in FY 86.

FACT SHEET
MR&T - FY 1986
TIPTONVILLE, TENNESSEE

1. Name of Study: Tiptonville, Tennessee

2. Study Authority:

"Resolved by the Committee on Public Works and Transportation of the House of Representatives, United States, that the Chief of Engineers, United States Army, is hereby requested to review the report of the Mississippi River and Tributaries Project, published as House Document Numbered 308, Eighty-eighth Congress, and other pertinent reports, with a view to determining the advisability of modifying the recommendations contained therein, with particular reference to providing additional improvements in the interest of flood control and other water resource related needs in the vicinity of Tiptonville, Tennessee."

Adopted: 14 November 1979 Sponsor: Representative Ed Jones of Tennessee

3. Description of Study Area and Nature of Problem. Tiptonville, the county seat for Lake County, is located approximately 105 miles north of Memphis, Tennessee, in extreme northwest Tennessee. The topography of the area is typical of the Gulf coastal plain with relatively flat relief. The land slopes north to south and east to west. The area is drained by a network of ditches with primary outlets into the Mississippi River. Flooding of the area resulting from high Mississippi River stages is a major problem. This flooding causes urban damages in Tiptonville and rural damages in surrounding areas. This study will investigate reduction of losses due to urban flooding.

4. Study History:

a. History: N/A (New Start)

b. Summarized Financial Data:

Total Estimated Cost	$350,000 (1)
Allocation thru FY 1985	0
OCE Allocation FY 1985	0
Amount that could be used FY 1986	$225,000

(1) Federal study cost only (Reconnaissance Phase - $225,000, Feasibility Phase - $125,000) Non-Federal study cost - $125,000 (Feasibility Phase)

5. Work Being Performed in FY 84. Not Started.

6. Work Scheduled in FY 85. Not Started.

7. Capability for FY 86. FY 1986 funds could be used to initiate and complete reconnaissance phase studies.

8. Changes in Scope or Cost during Past Year. The current study cost estimate of $475,000 is an increase of $40,000 over the last estimate ($435,000). The increase is due to salary increases.

9. Anticipated Study Results.

a. Alternatives being Considered. No alternatives have been formulated. After initiation of the study and identification of the problems and needs, alternatives will be formulated for consideration.

b. Probability of Plan Implementation. The likelihood of a Federal project resulting from these studies cannot be estimated until reconnaissance studies are underway. Alternative plans formulated to alleviate flood damages are expected to accrue benefits in the following categories:

Urban Flood Damage Prevention	95-100%
Rural Flood Damage Prevention	0-5%

10. Other Pertinent Information. Urban development in the northwest section of Tiptonville and Large agricultural areas are periodically flooded from Mississippi River overflow. In addition, intensively farmed agricultural areas south of Tiptonville that are protected from Mississippi River overflow are flooded from interior runoff when river stages remain high for an extended period of time causing the floodgates to be inoperative. Approximately 700 residents on 800 acres of urban and agricultural lands are affected.

REELFOOT LAKE, TENNESSEE

Question. Reelfoot Lake in West Tennessee is a unique natural asset. It is a lake which was created by an earthquake in the 19th century. Recently, however, Reelfoot Lake has been the subject of severe siltation. Clearly, there is a need to improve the water quality of Reelfoot, for, if no action is taken, Reelfoot Lake will die.

It has been suggested that an alternative source of water, other than the present silt-laden source, should be found. This could be accomplished by the diversion of Reelfoot and Indian Creeks.

Last year, the public works committees authorized a reconnaissance study to determine the feasibility of directing these creeks to provide an alternative, less silted source of water for Reelfoot.

Provide for the record a Fact Sheet outlining the need for this study and provide us with a capability statement on this study.

Answer. A Fact Sheet containing the requested information is provided.

FACT SHEET
MR&T - FY 1986
REELFOOT LAKE, TENNESSEE

1. Name of Study: Reelfoot Lake, Tennessee

2. Study Authority: The resolution is quoted as follows:

"RESOLVED BY THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS OF THE UNITED STATES SENATE, That the Chief of Engineers, United States Army be and is hereby requested to review the report on the Mississippi River and Tributaries project published as House Document Numbered 308, Eighty-eighth Congress, and other pertinent reports with a view to determining whether any modification of the recommendations contained therein are advisable, with particular reference to the need and feasibility of improvements in the vicinity of Reelfoot Lake, Tennessee, in the interest of flood control, sedimentation control, water quality, water supply, Fish and Wildlife preservation and enhancement, recreation, regional development, and allied purposes."

Adopted: 2 August 1984 Sponsor: Senators Howard Baker and James Sasser

3. Description of Study Area: The Reelfoot Lake Basin, situated on the east bank of the Mississippi River, extends 35 miles in a southerly direction between Hickman, Kentucky and the Obion River in Tennessee. The Basin covers an area of 280 square miles with Reelfoot Lake covering 18,000 acres at normal elevation. Reelfoot Lake proper contains a National Wildlife Refuge and a State Wildlife Management Area. Principal tributaries to the lake include Reelfoot Creek, Indian Creek, Bayou du Chien, and Lake No. 9. Running Reelfoot Bayou is the outlet for Reelfoot, which empties into the Obion River. The lake functions as a natural flood control reservoir, reducing downstream flood peaks. Inflows to the lake are high in sediment content and have greatly reduced the water depth and storage capacity, while encouraging the growth of aquatic vegetation. The study will determine the need and justification of improvements in the Reelfoot Lake Basin to address flood control, sedimentation control, water quality, and fish and wildlife needs resulting from the filling and degradation of Reelfoot Lake.

4. Study History:

a. N/A (New Start)

b. Summarized Financial Data:

Total Estimated Cost	$975,000 (1)
Allocation Through FY 1984	0
Budget Estimate FY 1985	0
Amount that could be used FY 1986	$400,000

(1) Federal Study Cost Only (Reconnaissance - $400,000, Feasibility - $575,000). Non-Federal Study Cost $575,000 (Feasibility Phase).

5. Work Being Performed in FY 1984: Not started.

6. Work Scheduled in FY 1985: Not started.

7. Capability for FY 1986: Funds for FY 1986 could be used to initiate and complete reconnaissance studies, coordinate with Federal and state agencies and concerned local interests, and hold initial public meeting.

The Reconnaissance Phase study could be completed in September 1986.

8. Change in Scope or Cost in Past Year: N/A

9. Anticipated Study Results:

a. Alternatives Being Considered: Alternatives will be identified and evaluated after initiation of the study. Possible alternatives include a pumping station, channel diversion and other channel modification on tributary and outlet streams, well fields, various lake management plans, and modifications to existing headwater retention structures.

b. Probability of Plan Implementation: The likelihood of a Federal project resulting from these studies cannot be estimated until reconnaissance studies are performed.

10. Other Pertinent Information: The area includes a number of existing projects. The main line Mississippi River Levee, authorized by the Flood Control Act of 15 May 1928 and subsequent amendments, is the drainage divide along the western edge of Reelfoot Basin. Channel improvements to Running Reelfoot Bayou were completed under authority of the Flood Control Act of 3 September 1954 (Senate Document 160/83/2 and House Document 91-414) and Section 201 of the Flood Control Act of 1965 with corresponding Senate and House Resolutions in 1970. Partial channel improvement of Bayou due Chien and construction of a pumping station near the north end of Lake No. 9 in Kentucky were completed under the modified flood control acts of 24 July; 1946 and 3 September 1954 (House Document 91-414). The USDA, Soil Conservation Service, has developed plans to construct 15 watershed lakes to provide flood damage reduction and sediment retention. Currently 6 dams have been constructed. Reelfoot Lake proper contains a National Wildlife Refuge and a State Wildlife Management Area and has exceptional environmental value.

Question. The Corps proposed a management plan for the area around the Dale Hollow Lake in Middle Tennessee. Under the plan, 150 acres of timber would be clearcut. I have opposed the clearcutting proposal because it is, I believe, of dubious merit. For one thing, the area is the home of at least 70 American Bald Eagles. I have joined the majority of citizens in the area asking the Corps to go back to the drawing board on this plan and work with the local citizens in developing an alternative. What is the status of the proposal for Dale Hollow?

Answer. In December 1984, the Nashville District of the Corps of Engineers concluded a series of five public information workshops about the forest management program at Dale Hollow Lake. Workshops were held in Celina, Byrdstown, Livingston and Nashville, Tennessee, as well as Burkesville, Kentucky. The workshops served the dual purposes of providing the public with the objectives and specifics of the program and receiving input on how we can improve the plan. The Nashville District is forming a multidisciplinary team of Corps and outside experts to evaluate the ideas and concerns expressed by the workshop participants, the written comments, and the plan itself to provide us with any recommended changes. The District expects to have a modified program ready for public comment in the spring of 1985.

The forest management program at Dale Hollow is an effort to preserve and enhance the natural and scenic resources for the long-term public good. The Corps of Engineers is open to any suggestions on the method of timber harvesting which will add to the multiple-use benefits and environmental enhancement of the public resources.

QUESTIONS SUBMITTED BY SENATOR DECONCINI

COST SHARING POLICY

Question. I understand that the Corps has instituted a cost-sharing requirement for all feasibility investigations with regard to flood control projects? Does this requirement apply to all Corps projects, i.e., navigation, etc?

Answer: The Corps of Engineers has developed a policy for joint Federal and non-Federal cost sharing of all feasibility studies, except inland waterway studies. We proposed implementing that policy with funds requested in our FY 85 budget but, in light of Appropriations Committees guidance, that said "The conferees direct that no upfront financing or cost sharing of studies or projects be implemented pending enactment of the required legislation", we are funding feasibility studies at full Federal expense in FY 85, once conditional contracts are executed. We still think it advisable to implement study cost sharing, however, and our FY 86 budget request is based on cost sharing the feasibility phase of 47 of our feasibility studies.

Question. While I understand the rationale for instituting the new cost-sharing arrangements, what happens if a particular locality or Indian Tribe has a serious flooding problem, but insufficient funds to match the Federal share of the cost of the study?

Answer. Study cost sharing is intended to promote the study of projects that will be implemented. If a sponsor can not afford to share in the study costs, it is not likely that they would be able to pay their share of project implementation cost. Consequently, study cost sharing should not be seen as a barrier to project implementation but rather a facilitator. A cost shared study should produce a study fully responsive to the sponsor's concerns.

Question. What is the Corps policy on cost-sharing relative to actual construction? Does this apply to small projects that can be completed under the Secretary's discretionary program?

Answer. The Corps Construction, General, budget for FY 85 and FY 86 reflect new funding arrangements we have negotiated for new construction start projects which are generally consistent wih the generic cost sharing legislation authorities we are proposing. So far, and in response to Committee directions, we have not applied this level of cost sharing to our small projects; however, our FY 86 budget request reflects the implementation of cost sharing for studies and construction to the small projects program consistent with the larger projects in accordance with the Administration's proposed legislation.

FEASIBILITY STUDIES IN ARIZONA

Question. Can you give me a detailed update on feasibility studies anticipated for Arizona projects including those on Indian reservations, and whether or not the local government has agreed to any cost sharing commitment?

Answer. The following are the feasibility studies and the anticipated completion date:

Gila R. & Tribs

a. Rillito River - July 85
b. Santa Cruz - Sept 87 (unfunded FY 86)
c. Salt-Gila - Sept 87 (unfunded FY 86)
d. Upper Gila - Sept 87

Nogales Wash - Sept 87 (cost-sharing contract: April 85)

Phoenix Cross-Cut - May 87 (cost-sharing contract: March 85)

Navajo Indian Res. - Mar 88 (unfunded)

RILLITO RIVER, ARIZONA

Question. I was advised during the last Congress that the Corps expected to complete its Chief of Engineers report on the Rillito River in July 85. Is it safe to assume that the Corps will have a report out by that date? If not please explain.

Answer. Yes, the District Engineers final report will be completed July 1985; Division Engineer Public Notice is scheduled September 1985.

CORPS WORK ON INDIAN RESERVATIONS

Question. Could you cite the authority given the Corps for doing investigative work on Indian reservations?

Answer. The authority for the Corps to do investigative work on Indian reservations would be Sec. 176 of the Water Resources Development Act of 1976 (Navajo Indian Reservation), and the small projects, Continuing Authorities, Program.

Question. Could you provide for the record a list of work on reservations in Arizona where the Corps has been the lead agency?

Answer. The following are a list of projects on the reservation:

Tat Momolikot Dam (Santa Rosa Wash) completed in 1972.
Section 14 Study Nazlini and Chinle Washes, Chinle, AZ., Initial Appraisal completed.
Section 205 Study, Ganado Dam, Initial Appraisal begun.

NEW GANADO DAM, ARIZONA

Question. As you are aware, there has been considerable interest expressed from the Navajo Tribe and the Apache County

Board of Supervisors for the Corps to undertake feasibility investigations with regard to the new Ganado Dam on the Navajo reservation. Could you provide me with an update on activities the Corps has undertaken on this project, and detail the sequence of events necessary before the Corps could intervene?

Answer. Authority exists to study flood control problems on the Reservation (Sec. 176 of the WRDA of 1976) however, no funds have been appropriated under this authority. Locals have requested the small projects route (Sec. 205) and an Initial Appraisal is underway.

GILA RIVER BASIN, ARIZONIA

Question. When does the Corps expect to complete its investigative work on the Gila River Basin under the authority of the Gila River and Tribs.?

Answer. The Corps expects to complete its investigation on the Gila River Basin September 1989.

Question. Can additional funds be utilized in FY 1986 for ongoing work over and above the request for $225,000? Please explain.

Answer. We cannot use additional funds as we are waiting results of FY 1985 studies to determine future direction and additional funding requirements.

SANTA CRUZ RIVER INTERIM, ARIZONA

Question. As you may know, there is considerable interest in Arizona for the Corps to complete its investigation with regard to flooding potential along the Santa Cruz River. Additional data needs to be gathered from the 1983 flooding. Why were funds not included in the request to move forward on the Santa Cruz River Interim Study?

Answer. The Division-wide funding priorities did not allow us to include funds for this study this fiscal year.

Question. How much is necessary to complete this investigation? (Still referring to the Santa Cruz.)

Answer. We need $150,000 to complete this investigation.

Question. Could this work be completed in FY 1986 if the funds remain available?

Answer. Yes. The study would be completed.

EPA SUPERFUND SITE — GLOBE, ARIZONA

QUESTION. Could you provide me with a status report on the progress being made to date with Corps activities on the clean-up of the EPA Superfund site at Globe, Arizona?

ANSWER. Yes, sir. The Corps has completed the final design; received public comment on it; and is awaiting completion of real estate procurement by the State. The public has no apparent problems with the design for cleanup , i.e. demolition and burial of the mobile homes onsite beneath a compacted soil layer having erosion protection. We expect the real estate procurement will be completed shortly. Should this occur as anticipated, construction should start this summer and be completed in early 1986.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

MAJOR REHABILITATION OF EISENHOWER AND SNELL LOCKS
ST. LAWRENCE RIVER. MASSENA, NY

Question: I understand that the Corps of Engineers has prepared a reconnaissance report for major rehabilitation of the Eisenhower and Snell Locks on the St. Lawrence River at Massena, New York. Please explain why this reconnaissance report was prepared.

Answer: This report was prepared at the request of the St. Lawrence Seaway Development Corporation under the authority of "Work for Others." The Seaway Corporation funded preparation of the report because of the immediate need for rehabilitation of these locks. This report is the vehicle by which the Seaway Corporation could seek funding and authorization to perform the rehabilitation.

Question: What are the extraordinary maintenance and structural repair problems that have historically plagued these locks?

Answer: The Eisenhower Lock has had a continuing problem with surface concrete deterioration which has been partially repaired little-by-little each year. About half of the damaged lock wall monolith surfaces have been repaired, and there are half which still require extrordinary maintenance.

Both the Eisenhower and Snell Locks had a structural crack running the length of each lock wall. These cracks were closed by addition of post-tensioned anchors in 1967. Since then, additional stability analyses have been run which indicate that the lock walls do not have adequate stability based upon current criteria.

Question: I understand that the concrete problem at Eisenhower Lock can be tracked to the cement used during the building of the lock. Please explain how the problem started.

Answer: The concrete deterioration at Eisenhower Lock has been linked to the natural cement used in the concrete mix. This natural cement is presumably "inert" and results in the concrete containing the natural cement having lower strength, making it vulnerable to frost action.

Question: What is the current condition of both locks?

Answer: At the Eisenhower Lock, about half of the deteriorated concrete surfaces in the intakes, culverts, discharge diffusers, and the south chamber wall have already been repaired. All repairs to date are adequate. Deterioration on the surfaces of other areas continues to be troublesome and repairs should be made. The stability of the lock walls at Eisenhower and Snell Locks was investigated and it was found that they do not meet current design criteria. However, there is no evidence, other than the structural cracks discovered and repaired in 1967-68, that there has been any significant movement in the lock walls.

Question. What remedial actions are proposed in your Reconnaissance Report?

Answer. The proposed action to repair the concrete deterioration at Eisenhower Lock is to scale off the deteriorated concrete, dowel in reinforcing rods, and form and pour new concrete. This is the historical method of repair which has proven successful.

The proposed action to stabilize the walls at Eisenhower and Snell Locks is to install post-tensioned anchors in the walls to secure them to their foundation.

Question. Please explain the proposed schedule for the rehabilitation of both locks.

Answer. These locks are not Corps of Engineers structures. They have been owned, operated and maintained by the St. Lawrence Seaway Corporation for over 25 years. Therefore, the Corps is in no position to develop a proposed schedule.

Question. What consequences do you foresee if the repair work is not accomplished?

Answer. If the remedial actions are not undertaken, one or more of the walls at these locks could move and result in closing down the lock for one full year. Because the Seaway locks are in series, closing any lock closes the entire system. The estimated economic loss to the U.S. from this 1-year closure is conservatively estimated at $200 million. This does not include regional or comparable Canadian losses.

Question. Under normal conditions operations and maintenance of the locks are performed by the St. Lawrence Seaway Development Corporation. Do you believe that the Corporation has the resources, both financial reserves and engineering resources, to accomplish the needed rehabilitation?

Answer. Since this is not a Corps project, we are not in a position to respond and to address the resources of the St. Lawrence Seaway Development Corporation.

QUESTIONS SUBMITTED BY SENATOR CHILES

MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK

Question. What is the present status of the experimental program for water delivery into Everglades National Park as authorized in Public Law 98-181?

Answer. The experimental program for water deliveries to ENP is being conducted through an iterative testing process [ITP]. Each iterative test is developed and agreed to based upon information obtained during previous tests. To date, two tests have been completed, a 30-day test in April and May 1984 and a 90-day test from August through November 1984. Both of these tests were designed primarily to obtain hydrologic data for the purpose of allaying concerns of local residential and agricultural interests. Coordination is now being conducted toward initiation of the next iterative test by May 1985. This will be a 2-year test of a method of supplying water deliveries which fluctuate in response to meterological conditions.

Question. Please specify the intent of the [illegible] Corps of Engineers with respect to the experimental program for the remainder of [illegible] and 1986.

Answer. The Corps intends to proceed with the next phase of the experimental program over a 2-year period ending in 1987 although problems in coordination of this proposal may delay completion. This, and other tests in the ITP, will be designed so as to avoid increasing the risk of flooding in developed portions of the east Everglades.

Question. Does the Corps of Engineers require an extension and/or modification of the authority provided in Public Law 98-181 to carry out the mandated objective of determining a permanent improved schedule for delivery of water to the Everglades National Park?

Answer. At this time we do not see a need for an extension and/or modification of the authority provided in Public Law 98-181. While we do not expect to complete our studies so that we can recommend an improved delivery schedule for at least another 2 years, the existing study authority appears to be adequate. As noted in the answer to the preceding question, experimental deliveries will be continued into 1987. If it becomes desirable to make experimental deliveries which conflict with the schedules established by Public Law 91-282, legislation would be required.

Question. Are sufficient funds requested in the fiscal year 1986 budget proposal to accommodate anticipated needs with respect to this program?

Answer. Adequate funds are available in fiscal year 1985 to complete this program as it is currently envisioned in the general plan. No additional funds will be required in fiscal year 1986.

Question. Have any changes occurred that would modify in any way the response I received from the Corps last year regarding parameters and a time frame to implement Public Law 98–181?

Answer. In order to address the problems associated with improved water deliveries to ENP in the most timely manner, the experimental program will be conducted concurrently with preparation of a GDM. The GDM will develop an improved water delivery method and will provide designs and cost estimates for required operational and structural modifications. The experimental program will provide interim improvement in water conditions within the park pending completion of the studies and will provide important data for development of a recommended water delivery system.

CROSS-FLORIDA BARGE CANAL

Question. Please explain why the Corps moved forward in this study in spite of the congressional guidance to the contrary in Public Law 98–50.

Answer. The advisory language contained in the House Appropriations Committee report on the 1982 Supplemental Appropriations Act directed the use of $450,000 to update and expand the 1977 analysis. A final decision on our response to this direction was delayed until it became clear that 1984 congressional efforts to deauthorize the project would not result in the enactment of legislation. In November 1984, notwithstanding the advice of the Senate Appropriations Committee in its report on the Appropriations Act of 1984, a $230,000 study effort was approved with the hope that this would help resolve the controversy over this project.

Question. Please justify the use of the 2⅞ percent discount rate.

Answer. The only reason for use of the 2⅞ percent discount rate is that, historically, we have found that there is usually someone who wants to know what the benefit to cost ratio would be using the discount rate in effect at the time testimony was given for initial construction funding. Benefits and costs using this discount rate will be presented for information only. Any conclusions or recommendations on project completion based on project economics will use the discount rate in effect at the time computations are made. This rate will be applied to the remaining costs to complete the project and to benefits which would be realized from completion.

Question. Since all the benefits depend on those sunk costs, please justify the calculation of a benefit-cost ratio which includes benefits based on sunk costs and omits the sunk costs themselves.

Answer. Sunk costs are irrevelant in decisions based on economic evaluations of whether to complete a project. This is a well accepted principle used in engineering and other kinds of economic analyses.

Question. Please explain what value the conclusions of the planned study could have if the study does not determine a benefit-cost ratio for the entire project based on the current discount rate, and if the recommendation or conclusions the Corps may make as a result of the study are not based on the benefit-cost ratio derived from the current rate.

Answer. As indicated previously, any conclusions based on economics will compare the cost to complete with the benefits from completion and will utilize the current discount rate. The value of any conclusions on this basis would be to show the economic merit for completion of the project.

Question. Pease elaborate on your plans to determine savings, if any, from shipping coal through the canal. It is my understanding that you plan to include the costs of building and operating a transloader at the west end of the canal, if one is needed, in the calculations for determining savings, if any, from shipping coal through the canal.

Answer. The understanding is correct, and the unit barge transportation cost will include the costs of building and operating a transloader if one is needed.

Question. Are you to assume, however, that transloading will not be needed because the coal would be shipped across the gulf and through the canal in river-sized barges (1,500 tons) that would be modified for gulf crossings? If so, since few if any are now in use, such barges would have to be built, and they are more costly to build and operate than conventional river barges. Would you then add these costs to the cost of shipping coal?

Answer. Barges suitable for gulf crossings will be considered and the cost of constructing and operating such barges will be included in the unit barge transportation costs.

Question. There were substantial objections to the benefit and cost categories of the original 1977 economic report of the Cross-Florida Barge Canal. Are your plans to accept the benefit and cost categories as justified or will you reevaluate these categories?

Answer. The benefit categories determined in the 1977 study will be accepted and updated by appropriate indices. The project costs will be reevaluated with no new engineering or design studies.

Question. If you do not plan to reevaluate the benefit and cost categories, does this decision in itself invalidate the "new" study on the basis accepting, as a starting point, benefits previously criticized as inflated and costs evaluated as understated.

Answer. This approach would not invalidate the "new" study since previous benefit and cost analyses are considered by the Corps of Engineers to be valid.

Question. In order to save $15 million in construction costs, the Corps in 1976 altered the design for the Summit Reach by raising the floor of the canal from the originally planned 28 feet mean sea leavel (msl). There is apparently evidence that in 1981 the ground water level in some parts of the Summit Reach sank too low to float barges if the bottom were at 31 feet msl. Obviously, this would affect the transportation benefits which assume uninterrupted traffic. This was not discussed in the earlier report. Do you plan to include this issue in the study?

Answer. This issue will not be included since ground water levels were thoroughly considered during the 1977 study. In February 1982, record low ground water was recorded in the vicinity of the Summit Reach, however, our estimates are that ground water would still have been an average of about 10 feet above the canal bottom. Should the ground water ever fall to a level which would result in less than 9 feet of water in the canal, pumps which are a part of lock facilities at either end of the Summit Reach could be used to raise the canal water level as required for navigation.

SUBCOMMITTEE RECESS

Chairman **Hatfield**. We will be moving this appropriation measure expeditiously and we may call upon you for additional help and assistance in the development of our recommendation. You have been very helpful today. We commend you for your frankness and look forward to working with you in resolving some of these long-standing problems, and in keeping the Corps of Engineers a growing, healthy, vital part of our Nation.

Mr. **Dawson**. Thank you very much, Mr. Chairman.

General **Heiberg**. Thank you, sir.

Chairman **Hatfield**. Thank you.

The subcommittee will stand in recess subject to call of the Chair.

[Whereupon, at 3:33 p.m. Wednesday, February 20, the subcommittee was recessed to reconvene at 2 p.m. Tuesday, February 26.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, FEBRUARY 26, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2 p.m. in room SD-192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Burdick, Sasser, and DeConcini.

DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY

STATEMENT OF HON. DONALD PAUL HODEL, SECRETARY OF THE INTERIOR

ACCOMPANIED BY:

ROBERT BROADBENT, ASSISTANT SECRETARY FOR WATER AND SCIENCE

ROBERT OLSON, ACTING COMMISSIONER, BUREAU OF RECLAMATION

OPENING REMARKS

Chairman HATFIELD. The meeting will come to order.

This afternoon it is my pleasure to welcome before the subcommittee the Honorable Donald Hodel, the Secretary of the Interior, along with Mr. Robert Broadbent, the Assistant Secretary for Water and Science, and Mr. Robert Olson, the Acting Commissioner of the Bureau of Reclamation.

While this is your first appearance before this subcommittee as the Secretary of Interior, Mr. Hodel, you are not a stranger to this committee. In the past you have served as the Administrator of the Bonneville Power Administration and most recently as the Secretary of the Department of Energy. In these positions, Secretary Hodel has come before the subcommittee on numerous occasions and always with great eloquence and completeness of testimony.

It has been a source of pride to see a native of Portland, OR, not only serve our region but the Nation in such an effective way. I look forward to working closely with you in your new capacity and new role.

So with that welcome, I would suggest Mr. Secretary, that we first hear your oral remarks, after which, if members have arrived and wish to ask any policy questions, they can be addressed to you. Any questions relating to specific projects should be addressed to Assistant Secretary Broadbent or the Bureau of Reclamation. Then we will excuse you, Mr. Secretary, and hear the testimony of the Bureau of Reclamation. Following that, Assistant Secretary Broadbent and Commissioner Olson will respond, as I have indicated, to any questions that the membership may have on individual reclamation projects.

PREPARED STATEMENT

If that procedure is satisfactory to you, you may proceed to outline, highlight, or summarize your testimony as you wish.

Your full statement will be made part of the record.

[The statement follows:]

STATEMENT OF DONALD PAUL HODEL, SECRETARY OF THE INTERIOR

Mr. Chairman and Members of the Committee:

I am pleased to appear before you today, as the Secretary of the Interior, in support of the President's FY 1986 Budget for the Department. During my tenure as the Secretary of Energy and as Under Secretary of the Interior, I sought to establish a good working relationship with this Committee. Now, at the beginning of President Reagan's second term, I have been given the privilege of serving as Secretary of the Interior and of having the opportunity to work with you to resolve the critical resource issues confronting this Nation.

I have the good fortune of having some familiarity with the Department of the Interior. Having spent 21 months as Under Secretary of the Department, and having served for six years as Administrator of the Bonneville Power Administration, I recognize many of the current issue categories. However, I have to learn -- and in some cases relearn -- specifics. In that process, I look forward to working with the knowledgeable, dedicated professionals at the Department.

I believe the Nation is best served when we have a clear consensus on broad policies that govern the everyday actions of the Executive branch. The Nation is not well served by emotional confrontation or impasse on basic policy.

GOALS AND OBJECTIVES

My goal at the Department is to build a national consensus on the broad policy issues which face the Department. I intend to do this by effectively communicating the Administration's priorities; consulting early and frequently with the Congress, States and local governments, and other interested parties; and striving to reach a consensus on the President's broad policy objectives:

- conserving the Nation's national park, wilderness and wildlife resources;
- enhancing America's ability to meet our energy and mineral needs with domestic resources;
- increasing the supply of quality water resources;
- improving the Federal Government's relationship with state and local governments; and
- developing the economic and social resources of American Indians, Alaska Natives, and the people of the U.S. Territories.

Certainly I recognize there will be conflicts and controversies surrounding individual actions and peripheral issues — that is the nature of the issues facing this Department. But, at the same time, I want to work closely with you in establishing the broad national resource policies that reflect the values, needs and wishes of the American people.

The 1986 budget reflects not only the Administration's objectives, but also the overriding financial realities we face as a Nation -- a budget deficit which totals $180 billion. This deficit requires making, and through this budget we have made, difficult policy choices. Those choices have meant reducing or eliminating many programs which have produced tangible benefits and which, evaluated on their own merits in a different budget context, would be funded. The details of the budget have to be considered, however, not in isolation but, rather, in the context of the financial realities with which we must grapple. If there is consensus on one broad national policy, it is the need to reduce the deficit.

DEPARTMENT BUDGET

It is with this consensus in mind that I have reviewed the Interior Department's budget and programs for FY 1986. This budget, $5.6 billion in budget authority and $6.2 billion in outlays, will allow us to exercise our stewardship responsibilities. The overall reductions of 15 percent in budget authority and 10 percent in outlays from the FY 1985 levels will require us to be more efficient and innovative to do all that we would agree is desirable. We also intend to recognize more fully the appropriate role and responsibility of State and local governments and to further cooperate with the private sector. The proposed reductions affect not only water project construction, but also include land acquisition, other construction programs, grants and payments to State and local governments, administrative functions and personnel compensation.

Now I would like to address briefly water resource issues which face this Nation. Providing an adequate supply of clean water is a resource challenge facing all levels of government, local, state and Federal, in the coming decades. Although current supplies are adequate in most regions, conflicting demands for water are approaching the limits of what current development can supply at low cost. In some cases, groundwater supplies are being depleted or threatened by contamination. Water delivery and treatment systems in other areas of the country are deteriorating. In other areas, more storage and delivery systems are needed.

This Administration, recognizing the primacy of State water law, has made a good start in addressing pressing water resource issues. We are now prepared, within existing resources and in close cooperation with the States, to develop a water management strategy in the national interest. This strategy must look at the issues of water quantity, quality, and cost, together, not as separate concerns.

There are three major organizations in the Department of the Interior which will help develop this strategy as well as perform ongoing responsibilities, in partnership with State, tribal, and local governments, in the assessment, development and management of water resources in the western States. The Bureau of Reclamation plans, constructs and operates water projects in 17 Western States. The U.S. Geological Survey, cooperating with Federal, State and local agencies and Indian tribes, plays an important role in collection and analysis of data on the quantity, quality and use of ground and surface water. These data and analyses support a wide range of private and public decisionmaking on water management and use. The Bureau of Indian Affairs provides technical assistance to tribes in managing and developing their water resources in a cost effective manner.

The work of the Bureau of Reclamation is supported by and, at the same time, supports the programs of the Geological Survey and the Bureau of Indian Affairs. One of my objectives is to coordinate fully the efforts of these three bureaus as necessary to improve the Department's performance in assisting States, local governments, tribes and other non-Federal organizations in carefully developing and managing water resources within the context of the Administration's water management strategy.

With respect to Reclamation programs specifically, it is imperative that we as a Nation revitalize the magnificent water development programs launched early in our history. I am committed to working with the Congress, the States, local entities, and the private sector to move forward in developing much needed, environmentally sound, and economically prudent water resource projects. We will continue to seek new partnership arrangements with States and other non-Federal interests in the financing and cost sharing of new projects, taking into account prior commitments.

Within these guidelines articulated by the President, we should be able to improve our program to meet America's current and impending water needs while recognizing Federal budgetary realities. By carefully following President Reagan's water policy we expect to be able to reduce Federal spending while still moving forward to meet our Nation's water needs. Negotiating cost sharing arrangements for each project has proven to be a rational, successful approach to financing project construction. These States have shown their willingness to provide appropriate levels of funding and Congress has approved a number of cost sharing arrangements over the past year.

BUDGET FOR BUREAU OF RECLAMATION

The 1986 budget request for the Bureau of Reclamation represents a balance between the Administration's 1986 budget policy to reduce the size of the deficit and the Administration's continued commitment to careful development of the nation's water resources. The Administration's budget projects outlays of approximately $1 billion for the Bureau of Reclamation, the same as the 1985 estimate. The $821 million budget authority request for the Bureau of Reclamation includes funds for three construction initiatives which have been proposed in previous budgets, as well as six new loans and 12 new plan formulation and advance planning efforts.

Consistent with deficit reduction objectives, outlays in the Construction Program are proposed to remain at $700 million, the same level as 1985. This outlay level will be derived from the $532 million in new budget authority requested in the 1986 budget, as well as from over $200 million in prior year appropriations. Within the new funds requested for 1986, we are again proposing three new construction initiatives: the enlargement of Buffalo Bill Dam and Powerplant in Wyoming; construction of power generating facilities at Headgate Rock Dam for the Colorado River Indian Reservation in Arizona; and the construction and uprating of facilities at the Hoover Dam in southern Nevada and northern Arizona. These projects are consistent with the general criteria which we follow for approval of new construction initiatives. There must be a clear need for the project and strong local support, as evidenced by cost sharing commitments by non-Federal interests. The projects must be economically feasible and environmentally sound. Finally, general economic and budgetary conditions must allow for the investment of Federal funds over the life of the project.

The State of Wyoming has provided a very clear statement of its support for the enlargement of the Buffalo Bill Dam and Powerplant by committing $47 million in up-front financing. Uprating at Hoover Dam will be paid for entirely with funds provided upfront by the power allottees. Construction of visitor facilities at the Boulder Canyon Project will be accomplished with 100% of the cost repaid by power revenues. The Bureau of Reclamation will construct a powerplant and transmission facilities at the Headgate Rock Dam to provide energy for irrigation, drainage pumping and other uses on the Colorado River Indian Reservation. Once construction is completed, the plant will be transferred to the Bureau of Indian Affairs.

The budget also will provide for continuation of construction on 57 projects and pre-construction on 2 projects already underway. In addition, work will begin on one rehabilitation and betterment project and up to three safety of dams projects, once modification reports are completed.

A portion of the reduction in funding for the construction program can be accommodated because construction prerequisites on some projects have not progressed as expected. On other projects, work is nearing completion and program requirements have diminished accordingly. However, we anticipate that some projects will be delayed at the level of funding requested for 1986 and projected for 1987-90.

The request for the Loan Program is $41 million, a decrease of $26 million compared to 1985, as 12 projects will be completed in 1985. This will provide for the continuation of eleven projects and permit work to begin on six projects. We are still in the process of determining the availability of funds in 1985 for new starts.

The 1986 estimate for the General Investigations program is $32 million, a decrease of $4 million. This program provides for investigations and engineering and scientific studies of potential projects for the conservation and utilization of water and related land resources. Our request includes $2.5 million for new advance planning studies and new plan formulation investigations that are important in assisting Western States to meet their water and energy needs. The new studies are consistent within the reduced appropriation level because they embody the President's new cost sharing policy. State and local beneficiaries will contribute more than $2.5 million to match the proposed Federal funding.

The budget request for operation and maintenance on 33 Reclamation-constructed facilities is $133 million, a $15 million decrease from the 1985 estimate, of which $13 million relates to a change in financing for operation, maintenance, and replacement at Boulder Canyon Project. Power revenues and payments from local organizations will finance $31 million in operation, maintenance, and replacement at Boulder Canyon in 1986 through permanent appropriations in the Colorado River Dam Fund.

Finally, we also request $49 million for General Administrative Expenses and $1 million for the Emergency Fund.

Mr. Chairman, I am looking forward to working with you and the members of this Subcommittee to assure the careful management and development of the water resources of the western States. I am now ready to answer your questions.

REMARKS OF DONALD HODEL, SECRETARY OF THE INTERIOR

Secretary HODEL. Thank you, Mr. Chairman. I appreciate the opportunity to be here and I thank you for the procedure which you outlined.

I have submitted to the committee my statement for the record. It attempts to lay out in some detail what we propose with regard to the Bureau of Reclamation.

I am pleased I am accompanied here today by Bob Broadbent, the Assistant Secretary for Water and Science of the Department, because I simply feel in spite of the effort I made, I am not as conversant with the details of this budget at this point as I would like to be.

From an overview standpoint, I would like say that some of the cuts reflected in this budget reflect the overall effort of this administration to come to grips with the budget deficit problem. If I were to probe most parts of the Department of the Interior, no one would say they felt they were being adequately funded. But we have tried to keep major programs alive and well managed in this tough budget time.

We have made some tough choices. I need to emphasize that we recognize the budget we have submitted to the Congress is our proposal for accomplishing what we need to do. We recognize that the Congress may very well have other views. We hope to work with you in reaching satisfactory resolution of some of the tougher budget issues.

With that, Mr. Chairman, I am available for questions.

Chairman HATFIELD. Thank you very much, Mr. Secretary.

I also thank you because this is first chance we have had to express appreciation to the Department on the program that was announced recently by Secretary Clark to complete the detailed planning studies for fishery enhancement in the Umatilla basin which is incorporated in this year's budget, I believe, as well.

VISUAL POLLUTION IN LAFAYETTE PARK

Mr. Secretary, before I get into policy matters, I want to use this occasion to raise with you a matter which is not relevant to the basic testimony of today, but this is the first time I have had the opportunity to mention something which concerns me. I have raised this in the letter to the Nation Park Service in the Department, but not with you until today.

As you know, some of us from Oregon have been concerned for many, many years about visual pollution, along with pollution of water, air, and other things. We have led the battle to abolish billboards and to eliminate a lot of the visual pollution in our area.

Now, the administration has announced that they are going to penalize States for not complying with the billboard regulation set forth in the Interstate Highway Program. As of this moment, only Oregon and Vermont, I believe, have complied with those regulations.

But having just come back from a meeting with the Republican leadership and the President at the White House, I get very irritated every time I drive down Pennsylvania Avenue and see the assortment of billboards erected across from the White House in Lafayette Park. I believe in freedom of speech, but I do not believe in the permanent erection of statements and billboards, and such material that pollutes the vision. I have rights, too, and that is to have an environment free of pollution.

I want to know what are the regulations governing the permanent placement of such signs. I say the "permanent placement," because you can go down there at 2 in the morning and the protesters are not there, but their sign is—there is their statement sign, whether it is about God or about Vietnam or Corregidor or "Remember the Maine." I see all of those things which are totally obliterating the beautiful environment of Lafayette Park.

What is the Park Service doing about that? Would you check that out? If you don't want to respond now, could you do so for the record?

Secretary HODEL. Mr. Chairman, I will check that out. I do know that the whole issue of the use of parks for expression of political or civil rights is an extremely sensitive issue, particularly in the Nation's Capital. I know that the Park Service has wrestled with this issue for far longer than the duration of this administration and that there have been some court suits which have established the rules. I do not know the background on the particular activity you now identify and how it relates to the regulations, but I will look into it.

Chairman HATFIELD. Let me underscore, I would defend the right of anybody to picket the White House and to carry a sign and a statement of any kind or to carry it around Lafayette Park or assemble at Lafayatte Park. But that does not mean they have a right to implant it in the ground and make it a permanent part of that park. In my view, they ought to be forced to carry the sign with them and carry it away when they leave. Their freedom of speech is not abridged by any kind of regulation, it seems to me, that says you shall not permanently place your sign in a location of public property that pollutes the environment and then leave that sign unattended.

Secretary HODEL. I will check into it, Mr. Chairman.

Chairman HATFIELD. I just feel there ought to be some kind of tightening up.

[The information follows:]

ERECTION OF BILLBOARDS ACROSS FROM THE WHITE HOUSE IN LAFAYETTE PARK

I am advised by the Acting Director of the National Park Service as follows:

Present regulations allow demonstration activity, including the use of posters and placards, in Lafayette Park. Past attempts to restrict demonstration activities in the White House area have been met by legal challenge in the local Federal courts. The courts consistently have held that the White House area is a "unique situs" for demonstration activities and have generally not upheld any more than minor restrictions on those activities.

However, recent court decisions seem to indicate that additional restrictions on demonstration activities might be permissible in the White House area. For example, the Supreme Court recently held that the National Park Service could ban camping in the Washington area parks as a means of preventing destruction of park resources. *Community for Creative Non-Violent* v. *Clark*, 468 U.S. 1 ___ 104 S.Ct. 3065, 81 L.Ed. 2d __ (1984). In addition, the Court of Appeals for the District of Columbia Circuit recently upheld a panel decision finding restrictions on the use and placement of signs on the White House sidewalk to be constitutional. *White House Vigil for the ERA Committee* v. *Clark*, No. 84-5271 (D.C. Cir., rehearing en banc denied January 11, 1985). Attorneys representing the National Park Service presently are considering possible regulatory changes in light of these and other decisions.

FEDERAL ROLE IN WATER RESOURCE DEVELOPMENT

Chairman HATFIELD. Now, to get something that is going to save the world. [Laughter.]

Mr. Secretary, I assume from the hearings on your confirmation and other statements you have made that you recognize that you are really basically, as Secretary of Interior, the architect of water policy, and as the Chairman of the President's Cabinet Council on Natural Resources, Water, and Environment.

What do you see as the role of the Federal Government in water resource development?

Secretary HODEL. I think the role of the Federal Government is varied because there are certain activities which we have done traditionally, particularly in the West, though not exclusively so, where we have identified, designed, and engineered projects that provide water storage, distribution, and purification. When I say the Federal Government, I include not just the Bureau of Reclamation, which of course has developed many of these projects, but also the Corps of Engineers, which has had a major role in water projects.

There is an opportunity now, as we look to the decades ahead and concern ourselves, as the President asked me to do in taking this job, with providing an adequate supply of clean water for this country. There is an opportunity, I think, for the Federal Government to have a significant, useful, and proper role in working with the States or regions, to the extent there are regional water efforts, by providing information, serving as a focal point for discussions, trying to identify where opportunities exist. But as anybody from the Northwest is fully aware, anything that begins to smack of interregional utilization of water in this country becomes enormously confrontational immediately, even at the first suggestion.

So, I think that the Federal role has to be very carefully circumscribed to that of providing information, bringing people together, and trying to see to it that the States, where joint efforts are necessary, can work together.

Without having had the benefit of a major assessment of the opportunities, that is my initial reaction.

WATER RESOURCE POLICY

Chairman HATFIELD. As you know, in current time, President Carter laid down a salvo in 1977, I believe, in one of his first major pronouncements as President. It came to be known as the water projects hit list.

Frankly, this administration thus far has not shown much more enlightenment as far as the necessity for continuing water conservation, impoundment, and water development vis-a-vis cost sharing and other issues. But what do you see as a possibility of resolving the present impasse that seems to have reached its zenith in the closing days of the last session during the consideration of the continuing resolution?

Secretary HODEL. I did not follow the water issue while I was at the Department of Energy closely enough to know the ins and outs of what occurred, but my impression is that in this budget we are seeking construction start money for three new starts which do include cost sharing. We have not, as I understand it, insisted on any particular level of cost sharing, but we have said that cost sharing will be evaluated on a case-by-case basis.

I look for confirmation to Mr. Broadbent.

Chairman HATFIELD. But these projects and those of the Corps of Engineers are awaiting resolution of the larger question of cost sharing and financing. In effect, new investment in water resource development by the Federal Government is in limbo until these larger policy questions are resolved.

Secretary HODEL. We have 57 ongoing projects which are funded in this budget which constitute a significant Federal investment. I think the problem relates to the new projects, if I am not mistaken.

Chairman HATFIELD. That is correct.

Secretary HODEL. I believe that the Presidential statement on water projects provides the foundation for us to go forward, and generally it is on a cost-shared basis that we seek funds for new projects.

Chairman HATFIELD. But you see the Catch-22 situation we are in. We cannot proceed with authorizing those projects, even offered by the administration, until we can reach some kind of a resolution on the question of cost sharing. How are we going to get off dead center?

COST SHARING FOR CORPS OF ENGINEERS PROJECTS

Secretary HODEL. It is my understanding, Mr. Chairman, that appropriations have not been as difficult a problem for us in regard to cost sharing because an appropriation can be made subject to some cost sharing. The problem has been with authorization and appropriations for Corps of Engineers projects where a fixed cost share is a requirement. They follow a different policy than we have, as I understand it.

Chairman HATFIELD. To recall, though, for the record, we had some projects that were subject to authorization and contingent upon whatever cost-sharing plan might be enacted. Mr. Stockman said, "Oh, no, we won't go that route." Now, he spoke for the President and the administration.

That was part of the continuing resolution in the closing days of the last session where things got a little bit acrimonious. We considered this, and there were those of us who do support cost sharing and some who were opposed to cost sharing, that we were trying to compromise with the White House to resolve the major issues. We saw this as an opportunity to get the Federal Water Investment Program back on track—a program that has been at a standstill for more than 10 years. So, the administration's position on the continuing resolution has led some to believe that the proposed new start projects in the budget is nothing but windowdressing, it is nothing but a phony proposal, because with that experience in the closing days of the last session so fresh in mind, it looks very strange to see this administration come up here and propose new projects.

Secretary HODEL. Mr. Chairman, Mr. Broadbent has indicated to me that he believes the projects that were in disput were Corps of Engineers projects.

Chairman HATFIELD. Well, we had some Bureau projects in that package as well.

Secretary HODEL. Some of which are in this budget.

Obviously I don't have a complete answer, Mr. Chairman.

Chairman HATFIELD. Then do I understand the administration does support these projects along with the Corps projects which are contingent upon a cost-sharing plan?

Secretary HODEL. I can speak to the projects in this budget and say that the proposed new starts are administration-supported projects on the basis of the cost sharing that is proposed in the budget.

NEED FOR COMPREHENSIVE NATIONAL WATER POLICY

Chairman HATFIELD. Mr. Secretary, we aren't going to resolve this today, but may I urge you to make this a high-priority item. We need to resolve this impasse and develop an understandable Federal water resource development policy. I really feel that after having gone through that experience the past October, where we were willing to make any project contingent upon a cost-sharing plan agreed to by the administration and the Congress, yet we still got a negative response from Mr. Stockman.

So I would urge you to make that a priority to help resolve between the Congress and the White House.

I have been deeply concerned about what I call the need for a national comprehensive water policy. I perceive circumstances arising, perhaps not so far down the road, which could create a greater crisis for this country than the so-called energy crisis we had in the seventies.

I need not recite to you the growing competition for water, the dropping of the water tables in parts of the country, major cities that had been on 30-day water supplies, leaking water mains, contaminated ground water supplies, et cetera, et cetera. There is ample evidence I think at all hands about the growing concern of the water resource of this country.

How do you feel about reaching for that goal or working toward that goal of developing a national, not regional, but a national comprehensive water program, recognizing conservation, the needs for municipal and industrial use, for irrigation, for the wildlife, fisheries, for power development, for all the multiple demands that are made upon our water supply? Is this something you think that is of priority?

Secretary HODEL. It is a matter of priority. Insuring an adequate supply of clean water is a matter that the President has asked each of his Secretaries of Interior to concern themselves with.

The hurdles are enormous, as you well know. You just recited some of the competing uses for water.

There is the further complication of the Federal-State relationship. I have grave reservations about an effort which would attempt to put the control of the Nation's water supply into the hands of a single or even a group of Federal agencies.

Chairman HATFIELD. No, I am not suggesting that. But we need to get away from this regionalism which continues to hamper the program. The State and local officials must know what the Federal Government ground rules are so that they can plan accordingly.

Secretary HODEL. Yes, and I certainly knew you would share that view.

But by the same token, we need to be careful when we structure a water policy proposal that we do not do it in such a way that it appears to be a Federal supplanting of the responsibilities of the States and regions.

Having said all of that, it is an enormously complex balancing act that is called for. It would seem to me that just as I feel I need to try in other areas of this Department to seek a consensus on the major issues confronting the Department of the Interior, we can expect no success on water policy unless we are able to begin discussions with the affected interest groups and States as to what constitutes a national water policy in order to begin to achieve a consensus on that basic issue. If we don't have agreement on the objective, it is almost impossible to agree on the magnitude of the problem and then what should be done about it.

Chairman HATFIELD. But somehow, Mr. Secretary, someone has to be a point person in bringing together these various and sundry proposals. You know, there was very serious attention given to what might sound like almost a science fiction project. An engineering company by the name of Parsons, you may recall, about 15, 20 years ago undertook an engineering feasibility study to transfer water from the Arctic through a system of canals and such down through Canada, down through the 48 States, even into Mexico, recognizing that the demand for water may create the economic feasibility sometime in the future for that kind of a project.

You know, there is a lot of work done on the whole question of how to deal with water. I can't help but feel that the Carter administration and thus far the Reagan administration would have a little different perspective toward water resource projects if they saw it as a part of a national responsibility for conserving and better utilization of our water.

They see it as somehow some isolated cement structure out in the West benefiting the West, when actually the water resource of this Nation, if we don't deal with it, it will be nationalized. It will have to be nationalized. There is no major segment of this country that is going to do without water to sustain life and industry. If another section is viewed as having an abundance of water, that in itself will nationalize the whole issue.

There better be a base of study, it seems to me, and policy that recognizes regional, local, and other competing laws as well as competing users, and then develop a national perspective on how the Federal Government can best assist in the development and utilization of this resource.

Secretary HODEL. Mr. Chairman, I am very willing to have my mind changed on this issue, but it is my feeling that a lot of study of the type that lays a foundation has been done. In fact, I think we have a tendency to study ourselves to death on this type of issue.

It seems to me that the problem at this stage is really more one of finding a political, I mean that in the broad sense of the word, a body politic consensus on a set of objectives or a mission. If we can move in that direction, then it is possible for us to relate these studies to something meaningful.

We have a vast amount of detail that is provided by the Geological Survey. We have enormous experience represented by the Bureau of Reclamation and Corps of Engineers. We have State water offices which have acquired information and now control water in many States.

But the interests in this country are so divergent on water that at this moment I am not sure it is possible to come up with the kind of core statement we did on energy because we really did have a goal which was meaningful and that permitted us to develop our strategies to begin to work toward that goal. I think we made some progress.

On water, it seems to me unless we have a similar consensus on the definition of a national water policy and goals, we are not going to get very far. We are going to be right where we are today as long as we fail to do that.

Chairman HATFIELD. We aren't going to resolve that, either. But I do think that I am going to look to you for greater achievement than previous Secretaries have made on this matter of water policy—we need someone to create an atmosphere in which a consensus can be achieved.

I would just urge you to look at the experience of Phoenix and Tucson, AZ, because here are two cities of one State, one with a very comprehensive water conservation program in place, the other with little or none, and to see the contrasting uses of water just in two cities of one State—it is a fascinating study.

It just seems to me if we did nothing else but to get a national water conservation program, if nothing else that would be a significant achievement and contribution to dealing with this water crisis, that I call a water crisis, that we are going to face at the bend of the road.

Senator **DeConcini.** Mr. Chairman, if you would yield on that subject, I couldn't agree more with you that the lack of a comprehensive water policy is really a major problem that past administrations have failed to address, and the same with this one. It is unfortunate that we really have not had a Secretary, and maybe this is the one, that will really address the need for a comprehensive water policy.

If you just addressed conservation, if you started right there and tried to develop some standards and some national policy criteria for conservation and also education, if you just started to educate the public on the need for knowing what water is and what it takes to maintain an adequate supply of quality water, it would be a great step forward.

Thank you.

Chairman **Hatfield.** I would say to my colleagues that at the beginning of the hearing I suggested what we would do would be to go through a series of questions for the Secretary, let him then be excused, and then hear the testimony from the Bureau of Reclamation and reserve any questions for the Bureau projects to the Assistant Secretary. But I would yield to the Senator from North Dakota on any questions he may wish to ask the Secretary.

Senator **Burdick.** Welcome to the committee, Mr. Secretary.

Secretary **Hodel.** Thank you, Senator.

GARRISON DIVERSION UNIT, NORTH DAKOTA

STUDY COMMISSION FINDINGS

Senator **Burdick.** Welcome to Mr. Broadbent also.

As you are probably aware, there were commission hearings on the Garrison project in North Dakota and other places this past fall and a commission finding was made. Bills have been introduced in conformance with those findings. Now I suppose the proper committee will be taking some testimony, or maybe they won't.

I have a series of questions here. My thinking is since you have just come on board the last few days, it probably wouldn't be fair to throw these questions at you. If you prefer, I would give you the questions and you can provide answers for the record. Would that be agreeable to you?

Secretary **Hodel.** That would be agreeable to me. That is a very gracious offer. I appreciate it. Thank you.

Senator **Burdick.** We will do that.

Secretary **Hodel.** Thank you.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR BURDICK

GARRISON DIVERSION UNIT ISSUES

Question. One of the most controversial subjects addressed by the Commission was the deferral of the Lonetree feature. The Commission said that Lonetree should be postponed until three conditions are met: (1) demonstration of need, (2) satisfactory conclusion of consultations with Canada, and (3) appropriation of funds. My question is: Will the Department make an assessment of needs prior to the construction of the

Sykeston Canal? My second question is: When will the Department resume consultations with Canada on Lonetree and other international aspects of the project?

Answer. The decision for Sykeston Canal has been made by the Commission; therefore, an assessment of needs for Lonetree Reservoir prior to construction of Sykeston Canal is not contemplated.

I am informed that consultations with Canada on the Garrison diversion unit have not been scheduled, but will be pursued as soon as possible, where necessary, to implement the Commission plan.

Question. I understand that the Solicitor has determined the Sykeston Canal is an authorized feature of the Garrison diversion unit. In terms of location, cost, length, functions, and environmental impact, how does the Sykeston Canal as envisioned by the Commission compare with the Sykeston Canal referred to in the 1965 authorization?

Answer. I am informed by the Acting Commissioner of Reclamation that Sykeston Canal as originally envisioned is displayed in House Document No. 325 dated February 4, 1960. It had a maximum capacity of 700 cubic feet per second to serve an estimated 34,780 productive acres. The canal followed an easterly alignment beginning at the Lincoln Valley Drop on McClusky Canal and ending near Carrington, ND. The overall length was over 60 miles. The references are on drawings, pages 4 and 30 of House Document No. 324.

The Commission recommendation does not call for development of irrigation along Sykeston Canal but rather proposes that Sykeston Canal be in lieu of Lonetree Reservoir. The Sykeston Canal would connect hydraulically the McClusky and New Rockford Canals in a similar manner as the Lonetree Reservoir. The canal would carry the full 1,600 cubic feet per second necessary to irrigate lands in the New Rockford area and down the James River. Sykeston Canal would essentially be a 26-mile extension of the main supply system connecting McClusky Canal and New Rockford Canal. The cost is currently estimated to be $53.4 million based upon very preliminary analysis. Pump-back facilities which collect return flows from the Lincoln Valley area and route them back to the Sykeston Canal would cost an additional $14,600,000. These return flows previously drained into Lonetree Reservoir. The environmental impacts for the Sykeston Canal have not been assessed as yet.

Question. As you may be aware, the Bureau has acquired the right-of-way on Garrison of 30,000 acres for Lonetree. There is some concern that the Sykeston Canal may be constructed on some of these acres to avoid having to negotiate any additional purchases. Would this approach be a major disincentive to any future development of Lonetree?

Answer. I am advised that the Garrison Commission alignment of Sykeston Canal goes across some lands in the vicinity of the James River dike area, a part of the Lonetree feature. However, this alignment is only one option of several being studied. Alternative alignments will be evaluated in the National Environmental Policy Act process.

Question. What is the projected construction costs of the Sykeston Canal and how does this compare with construction costs of the Lonetree feature? In addition, what is the cost differential on the annual operation and maintenance costs of these features?

Answer. The Acting Commissioner of Reclamation informs me that the current estimated cost of Sykeston Canal and associated modification is $68,000,000. This includes construction of a 1,600 cubic feet per second, 26-mile-long canal, $36,500,000; modification to McClusky and New Rockford Canal to include additional gates and check structures for water level control, $6,810,000; an automation system for operation control, $10,090,000; and pump-back facilities to collect return flows from the Lincoln Valley area, which previously drained into the Lonetree Reservoir, and route them back to the Sykeston Canal, $14,600,000. This is only an appraisal grade estimate and may increase when the final feasibility estimate is prepared. The total cost of Lonetree is estimated at $50,050,000, of which approximately $31,000,000 has already been spent.

The estimated cost of operations and maintenance is approximately $500,000 higher annually for the Sykeston Canal, mainly because of the sophisticated control system.

Question. Does the Department intend to do a programmatic environmental statement in which a comparison is made of Lonetree and the Sykeston Canal?

Answer. The Bureau will prepare an environmental statement for the Sykeston Canal and all other features of the Garrison Commission's recommendations requiring additional National Environmental Policy Act compliance.

Question. Will the Sykeston Canal be subject to review under the National Environmental Policy Act?

Answer. Yes. Several new features have been added to the Garrison diversion unit, and site-specific discussion of these will be provided pursuant to the Garrison Commission recommendations. Included is the Sykeston Canal.

Question. I assume the Bureau is making its own analysis of the cost and benefits of the Commission's recommendtions. Will you provide me with the projection of the overall cost of the project and the resulting cost-benefit ratio?

Answer. I am advised that the Bureau is currently refining some of the estimates used in the Commission report and that such refinement is required prior to evaluating overall project cost and developing a cost-benefit ratio. We have not yet developed a schedule for this analysis but will furnish you this information as soon as it is available.

Question. The Garrison Commission recommended the establishment of a five-member commission to review the impact on Indian reservations in North Dakota by Missouri River dams. (1) What is the status of the appointment of this Commission and when will the appointments be made; (2) are there any problems you are aware of that would delay the appointment of the Commission; (3) what sort of budget will the Commission have; and (4) what will be the timetable for completion of the Commission report?

Answer. Reclamation has reserved $200,000 in fiscal year 1985 to be transferred to the Bureau of Indian Affairs for this activity. The Bureau of Indian Affairs informs us that drafting of the charter for the Commission is in the final stages. The five members will be appointed after the charter has been filed with the General Services Administration. A timetable for the report has not been established yet.

STATEMENT OF SENATOR DECONCINI

Senator DECONCINI. Mr. Chairman, I have not been assigned to this committee officially.

Chairman HATFIELD. We are looking forward to your coming on our subcommittee, Senator.

Senator DECONCINI. I hope to be assigned it. I do have a few questions for the Secretary and I do have a statement to put in the record.

Chairman HATFIELD. The statement will be incorporated in the record. We are delighted to have you.

Senator DECONCINI. Thank you Mr. Chairman.

[The statement follows:]

STATEMENT OF SENATOR DECONCINI

Mr. Chairman, I wish to extend my thanks to you for affording me this opportunity to participate in this important hearing today with Secretary Hodel and officials from the Bureau of Reclamation. This Senator has a strong interest in reclamation programs not only because Arizona has a major reclamation project under construction, but because reclamation has a very important role to play in the continued growth and well-being of the entire western United States through water development efforts.

While I recognize the enormous responsibilities that rest on the shoulders of public officials in attempting to design a plan that suitably addresses our massive Federal deficits, we must try to fashion a budget which responds fairly to National needs without placing additional burdens on state and local interests which are already shouldering their share. When it comes to the Reclamation Construction program, Federal budget authors must bear in mind the fact that projects funded under this program are reimbursable—state and local interests have obligations to repay the Federal government for the costs of these construction projects. And, the sooner these projects are completed, the sooner the Federal government will receive its due payments.

It is for this reason that I am most concerned about the Fiscal Year 1986 budget request for the Bureau's construction program. The requested $532 million represents a 28 percent reduction in the level funded in Fiscal Year 1985. Some projects will be slowed and others, like the CAP, at least according to your own budget justification, will see its completion date delayed by an additional two years. Not only could these delays affect the final costs of the projects, but in some cases, could bring into play other Secretarial obligations which, in turn, could end up costing the Federal government even more. I intend to question the Secretary extensively on this point today. I believe it is in everyone's best interests to keep ongoing construction projects on track.

With reference to this Administration's water development policy, I am having a great deal of difficulty interpreting just what a "case-by-case" review with reference to cost-sharing entails. Flexibility about cost-sharing arrangements is a virtuous principle. On the other hand, I have yet to see any substance as an outcome of this policy, at least in the case of Arizona. We have committed ourselves in the State to formulating a non-federal financing plan for Plan 6 of the CAP. But we have no indication from the Department as to what they would be willing to accept. If we are willing to make a commitment to pay additional costs, shouldn't the Federal government provide some type of guidance? Again, this is a point on which I have several questions for the Secretary.

I am pleased to see that the Department has included some start-up funds in its budget request for new construction projects. However, continually delaying construction of a cost-effective project only leads to escalated costs. $1 million has been requested for Headgate Rock Dam and the Bureau estimates that the total Federal cost to complete this hydroelectric project is $58 million. I have been fighting for the Headgate Rock project since 1979. At that time we included funds in the budget to start engineering and design. In 1980, I offered an amendment to the Fiscal Year 1981 Appropriations bill to start "Phase I" construction. At that time, the estimated total Federal cost to complete the project was $21,880,000. But, because of Administration conflicts over "New Starts," no federal funds were made available. As a result of start delays, the cost of Headgate Rock Dam has increased approximately 175 percent. It just does not make good business sense to hold back on cost-effective projects. The costs can go nowhere but up.

I have a number of questions I wish to ask the Secretary this afternoon so I will not take any additional time of the Committee to extol the virtues of Arizona projects in my opening remarks. I do want to congratulate the Secretary on his recent appointment, however, and thank him for coming here today.

Mr. Secretary, I look forward to working with you on matters of mutual interest.

COST SHARING ON AUTHORIZED PROJECTS

Senator DECONCINI. Thank you for the opportunity, by the way, Mr. Chairman, to have the Secretary, Mr. Broadbent, and others here from the Interior Department.

Mr. Secretary, the chairman touched on the cost-sharing question, and we in Arizona are addressing that, as you undoubtedly know, in a very realistic way. But I want to get a clarification now that you are confirmed as the Secretary of the Interior.

Is it my understanding that cost sharing is assigned on a case-by-case basis and that it does not apply to authorized projects? Is that the policy?

Secretary HODEL. Senator, I am looking at the statement in the letter from the President to Senator Laxalt in which he sets out the seven components. I am not seeing anything to the contrary. But I am aware that there is a proposal for cost sharing on plan 6 on the Central

Arizona Project. I am assuming that plan 6 is consistent with the President's statement in the letter to Senator Laxalt.

Senator DECONCINI. The problem is that when the letter was presented, and I was there, it was then Secretary Clark, Chairman Udall, and I asked the question whether or not those criteria set out applied to authorized projects. Secretary Clark said the case-by-case test would not apply to authorized projects.

Now I am just asking, is that no longer the case, because of plan 6? I realize we are dealing with cost sharing for the survival of our water projects. But I want to get on the record what your understanding is on cost sharing on the authorized projects.

Secretary HODEL. Let me say that the language of the letter does reference cost sharing of all proposed projects. That sounds as if it is talking about future proposed projects.

Senator DECONCINI. Right.

Secretary HODEL. Mr. Broadbent suggests that perhaps the difference in the plan 6 situation is because of the length of time this project is taking and the concern we all have for getting it done on a reasonable schedule. In the proposal for the cost sharing, there is an effort to move it forward faster than if it were funded only with the Federal appropriation.

Senator DECONCINI. Mr. Secretary, I am not trying to embarrass you or put you on an exceptionally hot seat, because, we in Arizona realize that what you say is true. We realize cost sharing is here. But I wanted to be sure that the policy was understood by this Senator and that it is clear that based on the President's letter, the cost sharing would not apply to authorized projects, which includes, in my judgment, plan 6 and CAP. Notwithstanding, Arizona is moving forward and we hope to have some offer on cost sharing for you.

The reason I raise this issue is because we in Arizona hope that this fact will have some bearing on the Secretary's decision, on Interior's decision, on how much we have to give in light of the fact that plan 6 is authorized.

I am also aware that we may bump up against the ceiling on CAP, which would call into play the possible need to raise the authorization ceiling, but I think not. I just wanted to place that in the Secretary's mind.

FEDERAL GROUND WATER RECHARGE DEMONSTRATION

Mr. Secretary, a very minor thing. You may be aware of this. There is considerable interest in Tucson, AZ, for a Federal ground water recharge demonstration project. If you are not aware of this, I would be glad to have someone else answer it.

In Tucson, community leaders have discussed a modest ground water project with the Bureau of Reclamation officials and have offered to share 50 percent of the cost of such project. I wonder if you have had a chance to address that. If not, I will take it up with the appropriate Bureau people.

Secretary HODEL. Senator, I have not had a chance to review that.

PAPAGO INDIAN TRIBE WATER DELIVERY

Senator DECONCINI. Let me go to another one that you may know about. That is the Papago water settlement. Have you had an opportunity to look at that?

Secretary HODEL. Senator, I have an historic recollection of the Papago, but I am not currently briefed.

Senator DECONCINI. I am more than happy to have someone else answer that. Under the provisions of the southern Arizona water settlement legislation, you, the Secretary, are required to pay damages equal to the replacement costs of water to the Papago Tribe if water is not delivered to the Papago Indian community by October 12, 1992. The question is, if the completion of the Tucson portion of the CAP is delayed until 1993, which it looks like it is going to be, do you feel that you are obligated to start to pay the replacement cost or to pay costs equal to the value of the undelivered water? Do you have funds in the contingency fund for that?

Secretary HODEL. My understanding, refreshed by your comments, is we would have that obligation. I have been informed by the Bureau of Reclamation that it believes we can maintain the scheduled 1991 delivery to Tucson for the Central Arizona Project, rather than the initial 2-year delay that was anticipated based on the projected funding levels in the budget. If we are successful we will avoid having to face the problem you have raised.

Senator DECONCINI. So you answered really the key question on the Tucson aqueduct, that with the reduction of across-the-board 28 percent in the Bureau's construction program, and 12 percent or more, as I see it, in the Central Arizona Project, you don't expect a delay at this time of the Tucson aqueduct; is that correct?

Secretary HODEL. Yes, that is correct. The review by the Bureau indicated it can utilize the benefits of some bids it has received which are below estimate, plus some additional shifting of funds within the Bureau, to keep that project on schedule and avoid the 2-year delay that was anticipated.

Senator DECONCINI. Mr. Secretary, I want to thank you for that and also Assistant Secretary Broadbent. I have talked to him about this. The last time I talked to him, he was working on that subject matter but made no commitment that this might be the case. The completion of this project is extremely important to southern Arizona in that we don't want to witness another delay.

Mr. Chairman, I don't know how much time you want to permit us here. I could go on for an hour or for 10 minutes, maybe, if the chairman would indulge me, or 5 minutes.

Chairman HATFIELD. Why don't you hit the under side of that range. [Laughter.]

Senator DECONCINI. Thank you, Mr. Chairman.

AK CHIN WATER SETTLEMENT

Mr. Secretary, you may recall, a number of provisions were included in what is known as the Ak Chin water settlement legislation requiring the Secretary of the Interior to pay certain sums of money to Arizona entities in order for the Secretary to meet his obligation to the Ak Chin Indian community. A sum of $9.4 million was to be paid to the Yuma Mesa Irrigation and Drainage District, the Yuma Irrigation District, and the Gila Valley Irrigation District. The legislation further specified that such payments will be made by amending existing repayment contract obligations.

It is my understanding that those repayment contracts are ready to be executed, and I wonder why there were no funds included in the 1986 request to carry out these obligations? How do you intend to fulfill these obligations to the Ak Chin community unless the funds are made available?

Secretary HODEL. Senator, if it would be agreeable to you, I would like to refer that question to Assistant Secretary Broadbent.

Mr. BROADBENT. Senator DeConcini, the $9.4 million was for the people down in Yuma to buy out their rights. We had the $9.4 million in our budget, in portions of our budget, but it kind of fell through the cracks, candidly.

I am aware of the fact that BIA and the Bureau of Reclamation are trying to figure out ways to accomplish the purposes of that.

I would be happy to report to you as soon as we have a chance to analyze it.

Senator DECONCINI. Thank you, Mr. Broadbent. I appreciate that.

Mr. Chairman, I will reserve the balance of my time or whatever time the chairman can give me. Most of my questions will be to Mr. Broadbent.

Mr. BROADBENT. I am informed, if I could respond further, that we are preparing a supplemental for that money right now.

[The information follows:]

AK CHIN WATER SETTLEMENT

Public Law 98-530, dated October 19, 1984, authorized a revised Ak Chin Indian Community water settlement. The amended repayment contracts between the United States and the districts involved to carry out the provisions of this act are ready to be executed. The execution of the amended repayment contracts can be completed as soon as the final agreement between the Ak Chin Indian Community and the Department of the Interior is executed, which appears imminent.

Funds were not included in the fiscal year 1986 budget request because the proposed bill did not become law until October 1984. The fiscal year 1986 budget process was well advanced by that time. However, the Department is preparing a fiscal year 1985 supplemental request of $10.4 million from existing resources to fulfill the U.S. obligation to non-Indian entities as authorized in Public Law 98-530. Specifically, these funds will provide $5.4 million to replace, rehabilitate, and repair the water delivery system within the Yuma Mesa Irrigation and Drainage District, including water pumping facilities; for the purpose of on-farm and district water conservation and drainage measures, $2 million is needed for the Yuma Mesa Irrigation and Drainage District, $1 million for the Yuma Irrigation District, and $1 million for the North Gila Valley Irrigation District; and $1 million which will be matched by the district for payment into a fund established by the Central Arizona Water Conservation District to be used to purchase water during shortage years.

NAVAJO-HOPI INDIAN SETTLEMENT

Senator DECONCINI. Thank you very much. I do want to thank you, Mr. Secretary, for the time you and former Secretary Clark, Judge Clark, are putting forth in restoring disputes in northern Arizona in the Hopi/Navajo Indian settlement. It is a most sensitive part of our State and I think it is in the benefit of the country to bring that to an end.

I know that former Secretary Clark was out there recently. He indicated that something had to be done. He didn't offer anything specific. But I truly hope that now that the White House is involved, that you will continue to take a personal interest. I think only with the leadership of the Secretary, as well as the assignment of someone from the White House, can this be resolved without the potential expenditures of hundreds of millions of dollars, which are going to be very hard to come by, to satisfy the court decree.

Secretary HODEL. I appreciate those remarks, Senator. I have great hope and confidence that Secretary Clark will be able to work with the leaders of those tribes and resolve the issue. I think it was an outstanding idea, and I am tremendously pleased he would be willing to take on that kind of an assignment knowing the difficulty that lay before him. But I am extremely optimistic something can be forthcoming.

I think we all share the concerns you expressed. I think the President's decision to ask Secretary Clark to do that is highly commendable. I can assure you that any assistance the Department can give Secretary Clark in that effort will be available to him because we view that as a responsibility of the Department.

ADMINISTRATION WATER POLICY

Senator DECONCINI. Mr. Secretary, let me just end by echoing what the Chairman said today. The lack of any comprehensive water policy efforts or to inform the citizens of this country and the Congress as to what the real water policies of this administration are make it almost impossible for us to have any indication as to the administration's intent. I know the statements both from you, from Secretary Clark, and the President himself are that you propose these new starts and then everything breaks down. I just hope that we don't have to go through this again.

Chairman Hatfield, with the nice set of hair he has on his head, was absolutely fit to be tied, as the rest of us were, in the closing days of the 98th Congress when we could not get a straight answer from the administration on new starts until finally we just threw it all aside.

I take plenty of blame for the problems of disagreements up here as to where we are going to budget and how much we are going to spend or overspend. But we really need some direction from you and the administration and Mr. Stockman, so you all speak with one voice, if that is possible. Thank you.

Thank you, Mr. Chairman.

Secretary HODEL. Thank you.

ADDITIONAL PREPARED QUESTIONS FOR THE RECORD

Chairman HATFIELD. Thank you, Senator DeConcini.

Mr. Secretary, I have other questions we will submit to you in writing along with questions from Senator Kasten. I have nothing further for you at this point. So, we will excuse you and we would like Commissioner Olson to come forward.

Secretary HODEL. Thank you very much, Mr. Chairman.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR HATFIELD

Water Policy

Question: Mr. Secretary, will you assume the role of architect of water policy and Chairman of the President's Cabinet Council on Natural Resources, Water and Environment?

Answer: My goal at the Department of the Interior is to build a national consensus on the broad water policy issues which face the Department, including increasing the supply of quality water resources. I am committed to working with the Congress, the states, local entities and the private sector toward development of needed, environmentally sound and economically prudent water resource projects. I do intend to function actively as the Chairman Pro-Tempore of the President's Cabinet Council on Natural Resources and Environment.

Question: As you may know, the Administration and the Congress have been at an impasse over the last several years and have been unable to arrive at a compromise in this area. What do you plan to do to bring about a compromise on the user fee and financing issues so that project authorization legislation can move forward?

Answer: With regard to water resource development, my initial reaction is that we will continue to follow the basic policy outlined in the President's letter of January 24, 1984, to Senator Laxalt. The Administration believes that its position concerning project financing and cost sharing is clear, workable and generally acceptable.

Question: Do you plan to actively seek resolution of the issues presently delaying water resource development activities?

Answer: We feel that substantial progress has been made in dealing with the controversial issues which have impeded progress on water resource development activities. We will continue to work diligently with the Congress, States, and local interests in a serious effort to resolve problems of this nature.

Question: What specifically do you plan on doing?

Answer: Because the issues likely will vary considerably from project to project, I believe the best way to resolve difficult water resource development issues is to establish early an ongoing dialogue between the Administration and the Congress on a project-by-project basis. As soon as a particularly difficult issue comes to the attention of a Member of the Congress or of the management of the Bureau of Reclamation, preliminary, candid discussions should ensue.

I welcome any suggestions on this matter which the Chairman or a Committee member may have.

State and Local Coordination

Question: Mr. Secretary, your statement indicates that efforts "will continue to seek new partnership arrangements with State and other non-Federal interests in the financing and cost sharing of new projects, taking into account prior commitments." Specifically, what new arrangements are being sought and how do they differ from past policies and procedures?

Answer: Basically, the Bureau of Reclamation is seeking non-Federal monies to help finance the planning and construction of water resource projects. There is a 50 percent objective for plan formulation. I am advised that, in fiscal year 1985, half of the new planning starts achieved that objective and at least some non-Federal monies were committed for the remainder, except for salinity control studies. The policy on the percent contribution requested for new construction is flexible. However, the State of Wyoming's commitment to finance at least $47 million of the Buffalo Bill Dam Modification project, and current negotiations to obtain 100 percent non-Federal financing of the Central Utah Project Diamond Fork flow-through hydropower facility, are examples of how this process of seeking new partners applies to construction.

As used in my statement, "cost sharing" refers to the division of responsibility for water project expenditures between Federal and non-Federal entities. "Financing" refers to the provision of "up-front money." The new policy differs in two ways. First, we are asking the non-Federal sector to increase its cost share by taking responsibility for a greater portion of capital expenditures, in addition to their operation and maintenance responsibilities, and by contracting for planning studies which previously had been entirely a Federal activity. Second, we are asking the non-Federal entities to provide part of their share during the construction cycle. In the past, the Federal Government financed all of the non-Federal share of capital expenditures and the non-Federal entity repaid them.

Question: What is meant by "taking into account prior commitments?"

Answer: We will moderate our requests to non-Federal entities for increased cost shares or up-front funds when certain agreements have been reached predicated on past policies and procedures.

Execution of Congressional Intent

Question: Mr. Secretary, the Committee is concerned about how your Department approaches the Congressional intent of various items, particularly as it relates to language contained in the Committee reports.

How will your Department treat instructions contained in Committee reports? Do you set this policy or does OMB dictate how you treat this language?

Answer: In my opinion, the language contained in Congressional Committee reports often provides most helpful insights as to the intent of the Congress in those instances, for example, when the meaning or purpose of legislation is not entirely clear on the face of the statute and proper construction requires reference to matters outside the specific language of the statute, or when a particular statutory provision conflicts with another statutory provision and there is need to harmonize or reconcile the two provisions in a manner consistent with legislative intent.

Committee report language, I am advised, does not have the force and effect of law. Therefore, it would not be appropriate for the Department to agree in advance to be bound by instructions contained in Committee reports because, for example, such instructions might conflict with statutes or with clear Administration policy.

On the other hand, I believe that, in the absence of such conflicts, the Department should make every reasonable effort to accommodate clear expressions of Congressional intent, including guidance contained in Committee reports. Illustrative of the Department's desire to be responsive to such guidance is the tracking system established by the Department's Budget Office, which, I am informed, enables that office to monitor progress in responding to guidance contained in reports of Congressional Appropriations Committees.

Implementation of these policy approaches is the responsibility of the Department. Although Department officials are free to consult with the Office of Management and Budget for the purpose, among others, of obtaining OMB's views on various matters, including whether guidance contained in Committee reports conflicts with Administration policy, final decision authority rests with me, subject, of course, to direction from the President.

MARKET RATE REPAYMENT ISSUE

Question: I understand that the Administration is proposing that local sponsors of Reclamation projects repay at market rates the irrigation portion of the project. Can you explain why the Administration has made this proposal?

Answer: The Administration is not proposing that irrigation water users repay irrigation costs at market rates. The Department will continue to implement the President's policy on project financing and to follow Reclamation law.

Question: What would be the economic impact of such a charge on the Nation's international balance of trade, employment levels in the affected States, and the repayment capacity of the local sponsors?

Answer: If taken as an independent action, the impact would be an increase in the repayment assistance necessary to irrigators from either hydropower or municipal and industrial water sales or less irrigation construction.

The impact on local employment levels would be the lost opportunity for the creation of support industry jobs in the local economy, as well as the stabilization of employment in the agricultural sector. The magnitude and significance of these lost opportunities, of course, vary from State to State, as well as from county to county.

There would be no impact on the Nation's international balance of trade if there is a greater amount of assistance provided to the agricultural sector. However, if there is an elimination of irrigation construction, and thus, either a reduction in crops produced or a change in crops produced, it could affect the sales of agricultural products on the international market. While magnitudes of numbers would be hard to estimate, it can be assumed that the effect would not be a positive improvement in our current balance of trade.

Deficit and Spending Reductions

Question: Mr. Secretary, I note that the actual outlays (spending) proposed in the 1986 budget for the Bureau of Reclamation is essentially the same as the current year - around $1.0 billion. How do you explain this in light of the President's goal of lowering the deficit by reducing domestic outlays?

Answer: Presidential policy as applied to the Bureau of Reclamation called for a freeze on domestic outlays. The level of budget authority requested in 1986 along with the outlay of carryover funds from 1985 will result in budget outlays approaching nearly the same level as in 1985.

Question: What are the five year budget authority and outlay targets for the Bureau of Reclamation?

Answer: The budget authority and budget outlay targets for fiscal years 1986 through 1990 are listed in the following table.

Bureau of Reclamation
(in millions)

Fiscal Year	Budget Authority	Budget Outlays
1986	$ 821	$ 994
1987	991	1,013
1988	1,016	1,031
1989	1,041	1,049
1990	1,067	1,073

New Contract Awards

Question: Now I understand the 1986 budget proposes that no new construction contracts will be awarded on on-going Reclamation projects. Briefly, what was the reasoning behind this decision? Won't this cost more in the long run than will be saved this year?

Answer: The FY 1986 construction program proposes $66.7 million for new activities on both on-going and proposed new project starts.

The level of new contracts was influenced by the overall budget authority requested for the construction program, which was based on freezing outlays in FY 1986 at the FY 1985 level.

I am informed that the effect on net costs and benefits has not been analyzed in detail, but it would seem that in the long run the constraints imposed by the FY 1986 budget request would have the effect of stretching out the construction schedule. This may well result in an increase in the project construction costs. For example, reimbursable interest during construction on vendible functions such as power and municipal and industrial water might increase, and the recovery of revenue on the Federal investment might be delayed.

LOAN PROGRAM

Question: What will be the policy of your Department regarding the processing to the Congress of various categories of loan applications?

Answer: We have an administrative policy that separates loan applications into two categories. Category I loans must not exceed a subsidy factor of 50 percent based on amortized cost of the loan at the statutory interest rate. Category II loans have a subsidy rate between 50-67 percent based on the same factors as Category I loans. The subsidy is computed using the present worth values of construction funding advances and expected annual loan payment in accordance with the formula:

$$\text{Federal subsidy} = \frac{\text{Federal loan minus present worth of annual payments}}{\text{Total project cost minus grants}}$$

Both categories of loans are reviewed and processed in the order received but, by agreement with the Office of Management and Budget, Category II loans cannot be sent to the Congress without the review and approval of the Office of Management and Budget. Category I loans do not require the additional review and approval and may be sent directly to Congress following Secretarial approval.

QUESTIONS SUBMITTED BY SENATOR KASTEN

Ice Age Trail

Question: In Wisconsin we have two National Scenic Trails. One of these is the Ice Age Trail. I am concerned that the Ice Age Trail is not receiving the level of attention that it should from the Department of the Interior. I understand that your regional office in Omaha has repeatedly requested the Ice Age Trail be officially recognized as a part of the National Park System. The trail has been denied this status by the Department here in Washington. Mr. Secretary, it deeply disturbs me that the Department is not living up to its responsibilities to provide the necessary management to this trail. Why has the Department chosen not to recognize the Ice Age Trail as an official component of the National Park System?

Answer: The Ice Age National Scenic Trail and eight other components of the National Trails System are administered by the Secretary of the Interior through the National Park Service. However, the National Trails System Act encourages cooperative participation by a variety of public agencies and private interests in trail development and management. There is a diversity of landownership along these trail routes, including Federal, State, and local government lands and private lands. Because of this arrangement of shared ownership and direct management, National Park Service-administered national scenic and national historic trails, with one exception, have not been considered units of the National Park System but rather "affiliated areas." The Appalachian National Scenic Trail is considered a unit of the System because Congress has authorized and appropriated funds for land acquisition for the trail. I am advised that the National Trails System Act (16 U.S.C. 1241 et seq.) is silent on the issue of whether authorized components, such as the Ice Age National Scenic Trail, are to be administered as units of the National Park System.

Upper Mississippi River Environmental Management

Question: In the past several year's appropriation bills Congress has provided that progress in providing for transportation on the Upper Mississippi River be placed on equal footing with environmental management on the river. The Corps of Engineers is proceeding with advance design and engineering work for the construction of a second lock at lock and dam 26 at Alton, Ill. My question is what the Department is doing to prepare advance work on the environmental management and enhancement of the Upper Mississippi River?

Answer: Lock and Dam 26 planning began in the mid-1960s and its construction in the late 1970s identified the potential for extended navigation in the Upper Mississippi River Basin. This triggered interest in development of the GREAT River Environmental Action Team and Upper Mississippi River Basin Master Plan to deal with natural resource concerns. Fish and Wildlife Service in concert with the Corps of Engineers and affected States developed 5 alternative implementation plans. On December 1983 plan B was adopted and the FWS approved and began implementation of a Ten Year Environmental Action Strategy for the Upper Mississippi River to respond to the master planning effort.

Three areas of study were identified in the 10-year action strategy:

- o Need ecosystem studies of river systems
- o Need understanding of physical/chemical environment and affects on resident biota
- o Need awareness of most critical ecological relationships among major biological components of the River

Longer range actions identified include:

- o Natural resource field data collection
- o Organize data storage and analysis
- o Habitat restoration and enhancement
- o Interdisciplinary resource evaluation groups
- o Increase technical assistance to reduce watershed erosion and sedimentation

Current actions funded with direct appropriation and reimbursable funding include FWS actively participating with the Corps of Engineers and affected States along the Upper Mississippi River System to provide for fish and wildlife protection and enhancement. Activities such as new innovative dredge material disposal techniques including beneficial uses of spoils are being tried. Advance site selection for disposal areas is accomplished through a team effort (Service, COE, State). Monitoring studies and base line inventories are being carried out in cooperation with COE and States.

BUREAU OF RECLAMATION

STATEMENT OF ROBERT OLSON, ACTING COMMISSIONER, BUREAU OF RECLAMATION

ACCOMPANIED BY:

ROBERT BROADBENT, ASSISTANT SECRETARY FOR WATER AND SCIENCE

WILLIAM C. KLOSTERMEYER, ASSISTANT COMMISSIONER, BUREAU OF RECLAMATION

Chairman HATFIELD. Commissioner, if you would like to introduce those who accompanied you for the record and then proceed to summarize your testimony.

Mr. OLSON. Thank you very much, Mr. Chairman. I have with me at the table this afternoon Mr. William Klostermeyer who is the Assistant Commissioner for Administration. We also have several members of our staff backing us up.

PREPARED STATEMENT

I would like to thank you for the opportunity to appear before you today and before the committee. We would like to submit our detailed statement for the record and then spend about 4 or 5 minutes highlighting the Bureau of Reclamation's request for fiscal year 1986.

[The statement follows:]

STATEMENT OF ROBERT OLSON, ACTING COMMISSIONER, BUREAU OF RECLAMATION

Thank you, Mr. Chairman, for the opportunity to appear before you and the committee today.

The soundness of the Reclamation program has been proven many times over, through the success of the various Reclamation projects; repayment of over $1.5 billion to the Federal treasury by project beneficiaries; and by the economic strength of the 17 western states. The Reclamation program has played a significant part in the development of the West. There are continuing regional water management problems in that area, of which this subcommittee is well aware, and the fiscal year 1986 Reclamation program addresses many of these needs.

Water quality and supply issues are becoming particularly critical. In formulating corrective measures, we must consider various approaches to increased conservation, greater protection against contamination, and a realistic look at the management and development of our water resources.

Mindful of the Administration's and the Congress' concern with the budget deficit, we are requesting $820,877,000 for the Reclamation program for fiscal year 1986.

This request includes:

Construction	$ 532,430,000
Operation & Maintenance	132,665,000
Loan Program	41,415,000
General Investigations	32,050,000
General Administrative Expenses	49,200,000
Colorado River Dam Fund	31,767,000
Emergency and Permanents	1,350,000

Construction Program

While new funding for construction is set at $532 million, outlays are projected to remain at $700 million. This is the same level as 1985, largely as a result of carryover of funds that will be obligated in fiscal year 1985, but will not be outlayed until FY 1986.

Last year, the Garrison Diversion Unit Commission was established in accordance with Section 207 of the Energy and Water Development Appropriation Act for FY 1985. The Commission thoroughly evaluated the Garrison Diversion Unit and the water needs of North Dakota, and made recommendations that the Commission felt would meet the Federal obligations, minimize environmental impacts, substantially reduce Canadian concerns, and provide benefits for a majority of the State's citizens. Funding of $41,300,000 provides for continuation of the construction of principal supply works and general facilities of the Garrison Unit that are common to the 250,000-acre authorized plan and the Commission's recommendations. Activity in FY 1986 will also focus on the Oakes Test Area distribution and drain systems and continued acquisition of land and rights-of-way for project features and wildlife mitigation.

Another significant issue facing the Bureau, and the State of California, is the order of the State Water Resources Control Board relative to future operations of Kesterson Reservoir. The California Water Resources Control Board issued an order on February 5 directing the Department to submit a plan within 5 months for clean up of Kesterson within 3 years. The problem has reached the point of requiring some hard decisions and the number of options is limited. Our budget request includes $12,490,000 for the San Luis Unit, most of which will be directed towards studies of the Kesterson drainage problem. We are accelerating our efforts at the present time to find a suitable solution, and we will present more specific proposals when they have been developed, in cooperation with the State and other involved agencies.

This budget proposal allocates $173,500,000 for the Central Arizona Project, including the Non-Indian Distribution System. Construction will be completed on the Granite Reef and Salt-Gila Aqueducts and a portion of the Tucson Aqueduct. Water deliveries are still scheduled to begin in the Phoenix area in 1985 and for Pinal County in 1986. Major work will continue on the Tucson Aqueduct, Indian and Non-Indian Distribution Systems, Transmission Division, Regulatory Storage, and on the Supervisory Control System.

Under Title I of the Colorado River Basin Salinity Control Projects, we are requesting $22 million. This will allow work to continue on the Yuma Desalting Plant structure, membrane desalting equipment, fish and wildlife mitigation measures, and irrigation efficiency improvement activities in the Wellton-Mohawk Irrigation and Drainage District.

The $1 million proposed for the Headgate Rock Hydroelectric Project will initiate construction on a project that will provide energy for irrigation and drainage pumping on the Colorado River Indian Reservation. A contract for furnishing three turbine generating units will be awarded.

The request for $1,430,000 will allow for construction activities on the Boulder Canyon Project. A contract will be awarded for relocation of transmission towers. Preconstruction activities will continue on the parking structures, roadway realignment, and visitor facilities.

In Wyoming, the $10 million requested for modifications to Buffalo Bill Dam will provide for award of contracts for construction of the Shoshone River Bridge and necessary highway relocations. Preconstruction activities are also scheduled on the modification of the dam and spillway, the powerplants, and the manufacture of turbines, generators, and transformers. The Federal funds will be supplemented with $7.9 million from non-Federal participants.

In South Dakota, the Bureau will continue to fund construction of the WEB Rural Water Development Project. The request is for $18,525,000. The WEB Project will supply water from Lake Oahe for domestic use in the north central portion of the state.

Our funding request for the Central Utah Project amounts to $68,448,000. Construction of Upper Stillwater Dam, a roller compacted concrete dam, will continue while construction of Section IV of the Jordan Aqueduct and Section II of the Alpine Aqueduct will be completed. A contract will be awarded for Doc's Diversion Dam and Pipeline which will convey water to Upper Stillwater Dam. Construction of North Fork Siphon, the last major link in the collection system of the Bonneville Unit, will be completed. Work on the Hades Creek Stream Inlet will be completed during FY 1986. Strawberry Dam has been breached to join the reservoirs of Strawberry Dam and Soldier Creek Dam to create the enlarged Strawberry Reservoir.

McPhee Dam, the major feature of the Dolores Project, Colorado, was completed and dedicated in 1984. Eventually 35,360 acres, that are presently dryfarmed, will be irrigated. Work will be started on the South Canal and the Great Cut Pumping Plant will be completed which will deliver supplemental water to 12,800 acres of land.

Ridgway Dam, the main feature of the Dallas Creek Project in Colorado will be completed and preconstruction activities will continue on the powerplant.

The major portion of the $29,536,000 requested for the Brantley Project, New Mexico, is designated for the construction of Brantley Dam on the Pecos River. Brantley Dam will replace McMillan Dam, which has been declared unsafe because of an inadequate spillway. Citizens of the project area were on hand on October 27, 1984, for groundbreaking ceremonies.

On the Closed Basin Division of the San Luis Valley Project, which is a water project in south-central Colorado, work on Stages 1 and 2 will be completed during 1985. The $9,785,000 requested for FY 1986 will be used to drill deep wells and continue the construction of a canal and lateral system that will deliver the water to the Rio Grande to help meet commitments under the Rio Grande Compact with Mexico.

The $7,225,000 for the Chief Joseph Dam Project, Oroville-Tonasket Unit in Washington, will be used for continued replacement of the obsolete distribution system with a pressure pipe system. Work will continue on the steelhead fishery enhancement facilities.

For the irrigation facilities of the Columbia Basin Project, $6.535,000 will be used to continue construction of drainage facilities and to perform preconstruction activities on the Wahatis Wasteway. At Grand Coulee's Third Powerplant, $12,894,000 is programmed to continue the downstream riverbank stabilization to prevent damage by fluctuating water levels during the powerplant's peaking operations.

The requested funding for the North Loup Division, Nebraska, is $21,749,000. The construction of Calamus Dam is expected to be completed this summer with initial storage of water in the fall. Construction will be completed on Sections 2 and 3 of Mirdan Canal and lateral system, and work will continue on the Geranium System.

Funds amounting to $6,645,000 will allow work to continue on the access roads located on both sides of McGee Creek Reservoir in Oklahoma. Testing will continue on the pumping and aqueduct system that will deliver McGee Creek water to towns and industries in southeastern Oklahoma. Archaeology mitigation will be completed.

Work will be initiated on the Trinity River Basin Fish and Wildlife Management Program in California. Contracts will be awarded for the enlargement of the Tehama-Colusa Canal headworks, installation of a trash deflector, modification of Gate 11, fishscreens and enlargement of the bypass at the headworks settling basin.

On the San Felipe Unit, $37,597,000 will allow continuation of Pacheco Pumping Plant, Santa Clara Conduit-Section 2, Pacheco Conduit-Section 2, Coyote Pumping Plant, Hollister Conduit-Section 2, San Justo Dam and Reservoir, and installation of supervisory control equipment.

On October 25, 1984, groundbreaking ceremonies were held at Sunnyside Diversion Dam for the Yakima Fish Passage Facilities which will be funded at $4,353,000. Construction on several fishways and screen structures will continue. The work will focus on several diversion dams including Prosser, Roza and Easton.

The Rehabilitation and Betterment component of the Construction Program is budgeted at $6.9 million and will involve work on 8 separate units. In addition, non-Federal participants will provide about $4 million for work on these units. Older projects that have been in operation for many years are in need of major repair. Concurrent with the repair work, certain improvements can be made to accommodate changes in land use, methods of irrigation, and conservation measures. For example, work of this type will continue on two Washington projects, the Okanogan Irrigation District and the Yakima-Tieton Irrigation District. Work will be started in FY 1986 on canal lining on the Crooked River Project, Oregon.

The Safety of Dams Program is a component of the Construction Program. We are requesting $28 million in FY 1986 for investigations, preparation of modification reports, and preconstruction activities, as well as actual modification work. Modification activities will continue on six dams such as the Pactola Dam in South Dakota where the dam is being raised and the spillway enlarged. Included in the request is $4.6 million for up to three dams where modification work will be initiated in fiscal year 1986, following the completion and approval of appropriate modification reports.

The Drainage and Minor Construction component of the Construction Program will require $33.8 million involving 28 units. About $17.4 million will be used for the Colorado River Front Work and Levee System to continue repair and protective work required from the 1983 high flows of the river. Other work varies from $15,000 for construction of drains on the Manson Unit, Washington to $6 million for recreation facilities, fish hatchery complex, and permanent operating facilities on the Fryingpan-Arkansas Project in Colorado.

OPERATION AND MAINTENANCE

The Operation and Maintenance Program meets the basic needs of assuring water and power deliveries. The request of $132.7 million will be used on 33 multipurpose projects. Other Reclamation built projects have been turned over to the users to operate and maintain.

Power deliveries will be improved through uprating work at Fremont Canyon and Alcova Powerplants in Wyoming, and Keswick Powerplant in California.

Generator rewinding will be accomplished in Montana at the Yellowtail Powerplant and at Kortes Powerplant in Wyoming. Transformers will be replaced in Washington at the Grand Coulee Powerplant. In California, essential activities will continue at Tracy, Shasta, Folsom, and O'Neill facilities, plus replacement of supervisory control equipment for the Central Valley Project centralized water and power system control center.

Other types of work will include sand dredging on the Trinity River, repair of the Orestimba Creek siphon, modification of the Nimbus fish screens and Trinity River fish hatchery for mitigation purposes, all in California.

Since January 5, 1984, when the rules and regulations implementing the Reclamation Reform Act went into effect, we have been developing and implementing procedures and guidelines to uniformly administer the Act's provision. The 1984 certification and reporting process required by law is nearly complete. Forms for use in the 1985-86 water years have been revised and are currently under review by the Office of Management and Budget.

LOAN PROGRAM

We are requesting a total of $41 million for the Loan Program in FY 1986. This will allow work to continue on 11 projects of which 6 will be completed. In addition, 6 new loan projects will be started.

Construction will be completed on Ak-Chin Farms-East and Roosevelt Irrigation District in Arizona, Ramona Municipal Water District and Colusa County Water District in California and the dam and powerplant on the Galesville Project in Oregon.

Construction will continue on Rainbow Municipal Water District, Eastern Municipal Water District, and Oakdale Irrigation District, all in California, as well as the Yuba County Water Agency in California where work involves a powerplant, irrigation facilities, and municipal and industrial water supplies.

Two other ongoing loan projects requiring $3 million are in the Lower Rio Grande Valley of Texas. Most of the funds are budgeted for the Hidalgo County Irrigation District No. 2, where work will be continued on rehabilitation of the existing water distribution system.

GENERAL INVESTIGATIONS

The General Investigations appropriation involves several different activities, and we are requesting $32 million for investigations of projects and engineering and scientific studies. Of this amount, $15.7 million will be provided for 31 ongoing investigations; $3.9 million for six ongoing advance planning projects; and $2.5 million for 10 new plan formulation and 2 new advance planning investigations. Increasing municipal and industrial water supplies, enhancing water quality, and assisting in meeting irrigation and energy needs are major areas of emphasis. Included among the 12 new investigations is $325,000 to initiate the first phase studies to identify groundwater recharge demonstration projects as called for by P.L. 98-434.

Funding of $9.9 million will allow the engineering and research activities to continue the development of technologies to increase water supplies by cloud seeding techniques and to perform studies to assist in the planning, design, construction, and operation of multipurpose water resources projects. A recent example of the later activity is the contribution of cavitation research to the development, design, and installation of air slots in the spillways at Glen Canyon Dam.

In summary we are requesting, for fiscal year 1986, $32,050,000 for project investigations and research to identify solutions to future water needs and to advance the state of the art; $532,430,000 to construct and develop projects which the Congress has already authorized; $132,665,000 to operate and maintain completed projects to assure continuation of their benefits to the Nation; $41,415,000 to assist local entities in their own efforts to resolve water problems through the Loan Program; and $82,317,000 to carry out the other functions of the Bureau of Reclamation. Being mindful of the current concerns with Federal spending, this request for a total of $820,877,000 has been judiciously allocated to our various programs to continue work and minimize any adverse impacts.

This concludes my opening statement and I invite any questions you may have.

FISCAL YEAR 1986 RECLAMATION PROGRAM

Mr. OLSON. The soundness of the reclamation program, Mr. Chairman, has been proven many times over through the success of the various reclamation programs. But there are continuing regional water management problems in the West. We believe that the fiscal year 1986 reclamation program addresses many of these needs.

We are requesting $820,877,000 for the Reclamation program for fiscal year 1986. New funding for our Construction Program is set at $532 million while outlays are projected to remain at $700 million. This is essentially the same level as we anticipate in 1985. It is largely as a result of carryover of funds that will be obligated in fiscal year 1985 but not outlayed until fiscal year 1986.

GARRISON DIVERSION UNIT, NORTH DAKOTA

As was pointed out, last year the Garrison Diversion Unit Commission was established to thoroughly evaluate the Garrison diversion unit and water needs of the State of North Dakota and to make recommendations that the Commission felt would meet the Federal obligation to minimize environmental impacts, substantially reduce Canadian concerns, and provide benefits for the majority of that State's citizens. Funding in fiscal year 1986 of $41.3 million provides for the continuation of the principal supply works and the general facilities of the Garrison diversion unit that are common to the 250,000-acre authorized plan and the Commission's recommendations.

KESTERSON RESERVOIR, CALIF.

Another significant issue facing the Bureau, Mr. Chairman, and the State of California, is the order of the California Water Resources Control Board relative to future operations of Kesterson Reservoir. The California Water Resources Control Board issued an order on February 5 directing the Department to submit a plan within 5 months for the cleanup of Kesterson within 3 years. The problem has reached the point of requiring some hard decisions and the number of options is limited. We are accelerating our efforts at the present time to find a suitable solution, and we will be able to present more specific proposals when they have been developed in cooperation with the State and other involved agencies, both Federal and State.

CENTRAL ARIZONA PROJECT

The budget proposal allocates $173.5 million for the Central Arizona Project, including the non-Indian distribution systems. Water deliveries are still scheduled to begin to the Phoenix area in 1985 and to Pinal County in 1986.

THREE NEW PROJECTS

The $12.4 million in our budget request will provide for initiation of the construction of three projects. That is the Headgate Rock hydroelectric project, Arizona and California; improvements to the Boulder Canyon project in Arizona and Nevada; and the Buffalo Bill Dam and powerplant modifications in Wyoming.

SAFETY OF DAMS PROGRAM

The Safety of Dams Program is a component of our Construction Program. We are requesting $28 million in fiscal year 1986 for investigations, preparation of modification reports, preconstruction activities, as well as the actual modification work. Modification work will continue on six dams, and $4.6 million is being requested for up to three dams where modification work will be initiated in fiscal year 1986.

DRAINAGE AND MINOR CONSTRUCTION

The drainage and minor construction component of our construction program will require $33.8 million for 28 different units. About $17.4 million of this will be used for the Colorado River front work and levee system to continue the repair and protective work required as a result of the 1983 high flows on the Colorado River.

Work will continue on 57 ongoing projects, but for several of these projects at a slower pace than originally scheduled.

OPERATION AND MAINTENANCE PROGRAM

The Bureau of Reclamation's Operation and Maintenance Program meets the basic needs of assuring water and power deliveries, and our request of $132.7 million will be used on 33 multipurpose projects.

RECLAMATION REFORM ACT

Since the rules and regulations implementing the Reclamation Reform Act went into effect we have been developing and implementing procedures and guidelines to uniformly administer the act's provisions. The 1984 certification and reporting process required by law is nearly complete.

LOAN PROGRAM

Mr. Chairman, we are also requesting a total of $41 million for the Loan Program of the Bureau of Reclamation in fiscal year 1986. This will allow work to continue on 11 projects, of which 6 will be completed in that year. In addition, we anticipate starting six new loans.

GENERAL INVESTIGATIONS

The general investigation appropriation for the Bureau of Reclamation involves several different activities. We are requesting $32 million for investigations of projects and engineering and scientific studies. This includes $2.5 million for 10 new plan formulation and 2 new advanced planning investigations. Included among the 12 investigations is $325,-000 to initiate the first phase studies to identify ground water recharge demonstration projects as called for in Public Law 98–434.

BUDGET SUMMARY FOR THE BUREAU OF RECLAMATION

Mr. Chairman, in summary, we are requesting for fiscal year 1986, $32 million for project investigations and research to identify solutions for future water needs and to advance the state of the art; $532,430,000 to construct and develop projects which the Congress has already authorized; $132,665,000 to operate and maintain completed projects to assure continuation of their benefits to the Nation; $41,415,000 to assist local entities in their own efforts to resolve water problems through our Loan Program; and $81,317,000 to carry out the other functions of the Bureau of Reclamation.

Being mindful of the current concerns with Federal spending, this request for a total of $820,877,000 we believe has been judiciously allocated to our various programs to continue work and to minimize any adverse impacts.

Mr. Chairman, with that, I invite any questions that you may have.

Chairman **Hatfield**. Thank you, Commissioner Olson.

IMPACT OF BUDGET REDUCTION ON CONSTRUCTION PROGRAM

Commissioner, I note in the budget request, construction activities is about 28 percent less than the 1985 budget. What does this budget request level mean in terms of delayed completion schedules and lost benefits?

Mr. **Olson**. As far as the delayed completion schedule, Mr. Chairman, we anticipate that there could be up to a 1-year delay on 23 projects. But of those 23 projects, 6 of them are affected by the budget request of 1986 and the remainder of those 23 projects are impacted by what we call the outyears, the 1987 and 1988 and 1989 funding levels.

The impact of 1986 will delay 6 projects, but overall, with our passback, we say 23 of them could be delayed up to 1 year.

Chairman **Hatfield**. Those outyear impacts are primarily on the basis of OMB's limitations, ceilings.

Mr. **Olson**. On anticipated ceilings, sir. This means that in our budget request of 1987, theoretically we would have a chance to go back and revisit that issue.

COST OF DELAYS

Chairman **Hatfield**. Is there a dollar figure you can give to us as it relates to the impact on the cost of extending these completion schedules by a year or two?

Mr. **Olson**. On the increased inflation cost, we would have to work up an estimate for you. I can't give it to you off the top of my head.

Chairman **Hatfield**. I would like to have that, as well as the estimate of the lost benefits in that 1-year or 2-year delay.

Mr. **Olson**. This issue is currently being studied by our technical staff. We anticipate that we will be able to forward our study conclusions shortly.

KEEPING KEY PROJECTS ON SCHEDULE

Mr. **Olson**. Mr. Chairman, we have been able to make a determination that because of some good bids that we recently received, we could keep such projects as Tucson water delivery on schedule in 1991. We are looking at business decisions to increase revenues and to apply our resources to those projects that are close to completion where we have a significant Federal investment.

Of those 23 projects, there are some that basically have very little dollars invested in them, but because they are in our program, they show up as a 1-year delay.

Chairman **Hatfield**. Would you give us a list of those projects, a breakdown, as to which ones will be delayed, the planned contract awards, et cetera?

Mr. **Olson**. Yes, sir. We will provide that for the record.

[The information follows:]

New Work in FY 1986 for Projects Delayed by Budget Constraints
(Dollars in thousands)

Project/Contract	Total Estimated Cost	FY 1986 Requirement	Award Date	Description of Work to be Performed
Projects Delayed by FY 1986 Constraints:				
Central Arizona Project				
Prime Ak Chin Distribution System	5,494	1,663	1/86	Construct Indian water delivery system.
Completion-Brady Pump Plant	7,315	767	5/86	Complete pumping plant.
Completion-Pichaco Pump Plant	7,735	811	5/86	Complete pumping plant.
Completion-Red Rock Pumping Plant	8,950	938	5/86	Complete pumping plant.
Title I Division				No major new contracts will be awarded in FY 1986. Minor contracts for Gila River Sills and Mittry Lake revegetation studies will awarded. FY 1986 need is $230,000.
Title II-Paradox Valley				No major new contracts will be awarded in FY 1986. Minor equipment totalling 336,000 will be purchased.
Dolores Project				
Construct South Canal	4,036	1,515	4/86	Construction on South Canal will be started.
McGee Project				
West Side Road Phase 10A	1,000	50	9/86	Construct access roads to Brantley Dam.
East Side Road Phase II	3,900	50	10/85	Construct access roads to Brantley Dam.
West Side Road Bridge	1,200	50	9/86	Construct access roads to Brantley Dam.
WEB Rural Water Development Project				No major new contracts will be awarded in FY 1986. Approximately $18.5 million will be used to continue planning, designing, and constructing the project to provide water from Lake Oahe for rural residents.
Projects delayed by FY 1987-1990 Outyear Constraints:				
Columbia Basin, Irrigation Facilities				No new contracts will be awarded in FY 1986. Approximately $1.6 million will be used to continue construction of up to 16 drainage blocks.

New Work in FY 1936 for Projects Delayed by Budget Constraints
(Dollars in thousands)

Project/Contract	Total Estimated Cost	FY 1986 Requirement	Award Date	Description of Work to be Performed
Columbia Basin, Third Power Plant				
Overhead Transmission Lines	10,000	500	5/86	Install new 115/230 kilovolt lines.
Area 3,4,7, and 8 Cables	1,400	100	5/86	Install data/control cable for water table levels.
Fire Protection for Control Cable	2,400	400	8/86	Install sprinkler systems, fire barriers, and/or modify ventilation systems. Final configuration is to be decided for both contracts.
Fire Protection for 500-kv Cable	2,000	100	9/86	
Yakima Project				
Prosser Screen and Structures	3,920	2,500	10/85	Install screens to reduce fish mortality.
Minidoka Project, Jackson Lake Dam				
Stabilize Dam	12,000	5,000	6/86	Initiate work to stabilize dam by strengthening embankment and foundation.
CVP, Sacramento River Division				
Fish Screen/Settling Basin	1,400	646	4/86	Install screens to reduce fish mortality.
Tehama-Colusa Canal Hdwrk Enlarge	1,582	730	4/86	Increase canal capacity to serve downstream users.
Newlands Project				No major new contracts will be awarded. FY 1986 work includes preconstruction/design activities on needle valves at Lahontan Dam, lining of S-5 Lateral, and miscellaneous contracts at Lake Tahoe/Derby Division Dams, the Truckee Canal and the Main Carson Division.
Colorado River Front/Work Levee System				
LAAPP-Cibola Levee(Heart Mountain	5,500	2,000	2/86	All four contracts are part of the Levee Armoring and and Protection Program. Contracts are identified with quarry sites for materials for the levee.
Parker Phase 2-Hills Ranch Quarry	3,000	3,000	10/85	
Parker Bank-Agnes Wilson Quarry	2,000	2,000	10/85	
Cibola Bankline-Cibola Quarry	1,950	830	6/86	
Title II-Grand Valley Unit				
West End Lateral Lining	2,850	1,367	2/86	Laterals are to be concrete-lined.

Project/Contract	Total Estimated Cost	FY 1986 Requirement	Award Date	Description of Work to be Performed
CUP, Bonneville Unit				
Doce Diversion Dam/Feeder Pipe	1,843	442	4/86	Construct diversion dam/pipeline.
Rhodes Diversion Dam-Stream Inlet	1,340	251	7/86	Construct diversion dam.
Jordanelle Pipe Line/Swyd Relocat	1,078	929	5/86	Relocate switchyards and pipelines.
Duchesne River Canal Rehab	23,265	3,000	10/85	Rehabilitate Duchesne River Canal.
Syar Tunnel-Dam Roads	2,910	1,132	3/86	Construct access road to Syar Dam.
Monks Hollow Foundation Tunnel	1,000	900	3/86	Construct tunnel in foundation of Monks Dam.
CUP, Jensen Unit				No major new contract awards in FY 1986. $1.5 million in FY 1986 to complete project distribution system and fencing.
CUP, Upalco Unit				No major new contracts to be awarded in FY 1986. $100,000 to be used for preconstruction studies.
Arbuckle Project				No major new contracts to be awarded. $230,000 for preconstruction studies on Sulphur Pump Plant and Pipeline.
Brantley Project				No major new contracts to be awarded. $29.5 million will be used to continue construction of Brantley Dam and to relocate railroad.
San Luis Valley, Closed Basin				No major new contracts to be awarded. $1.6 million to be used to complete items on stage 1-3 laterals and canals.
P-SMBP, Garrison Diversion Unit				
James River Clean /Channel Improv	8,300	150	5/86	Remove debris and other actions to increase James River to serve downstream irrigation users.
Irrigation Drain-New Rockford	2,500	50	7/86	Construct irrigation drainage facilites.
New Rockford 1B-Lining	4,500	1,700	9/86	Concrete line drainage facilites.
West Oakes Block 2B Drains	2,100	100	4/86	Construct irrigation drainage facilites.
P-SMBP, O'Neill Unit				No major new contracts in FY 1986. $240,000 in FY 1986 for initial land acquisition.
P-SMBP, North Loup Division				No major new contracts in FY 1986. $21.7 million

IMPACT ON NEW CONSTRUCTION AWARDS

Chairman HATFIELD. How will that impact on the 1986 awards of new construction contracts?

Mr. OLSON. We will still have 1986 new contracts awarded to the extent that we have funds available. We have scheduled new contracts on phase A of the Tucson aqueduct. We also have approximately $40 to $60 million on new contracts in fiscal year 1986 elsewhere in the Construction Program.

Chairman HATFIELD. Do I understand then that OMB has not placed any restrictions upon you in the awarding new contracts in fiscal year 1986?

Mr. OLSON. That is correct. That understanding arose from budget documents based on a perceived shortfall of the amount of money that we had for new contracts. There is no moratorium or restriction on new contracts if we have funds.

ADDITIONAL PREPARED QUESTIONS FOR THE RECORD

Chairman HATFIELD. I have a series of other questions that I will submit to you in writing.

Mr. OLSON. Thank you, sir.

[The questions and answers follow:]

Questions Submitted by Senator Hatfield

Construction Program

Question: The 1986 budget request for the Construction Program reflects a 30 percent reduction in obligations in 1986. What will be the impact of such an action in reduced economic activity in late fiscal 1986 and the following year?

Answer: The 30 percent reduction in obligations for the Construction Program translate into a reduction of approximately $207.6 million. In addition, such a fund reduction will reduce non-Federal project related employment by about 3,600 workyears. Indirect employment related to goods and services not used directly on the project would also be reduced by approximately 6,300 workyears.

Question: On July 16, 1984, the President signed the Energy and Water Development Appropriations Bill for fiscal year 1985 into law. In so doing, he approved the $740 million Construction Program proposed by the Congress. Now, wasn't this funding mainly for activities related to existing, on-going projects where a Federal commitment had clearly been made?

Answer: Yes. The $740 million in funds appropriated by Congress for FY 1985 were directed towards continuing activities related to ongoing projects.

Question: How does the funding request for 1986 impact the award of new construction contracts? What effect does such a policy for 1986 have on your work for the current year? Please be specific in terms of program activities and funding obligations.

Answer: The fiscal year 1986 Construction budget request includes $66.7 million for new contract awards. Since underfinancing totals $79.6 million, some of the new contract awards may not take place as scheduled if there is no slippage in the ongoing work. The FY 1986 program does allow adequate funding for ongoing activities. Thus, we do not anticipate an impact on the current year program. We will provide for the record a list of the contracts with a total cost of over one million dollars which we plan to award in FY 1986.

(The Information Follows:)

Construction Program
NEW CONTRACTS AWARDS IN EXCESS OF $1 MILLION TOTAL ESTIMATED COST
(Dollars in thousands)

Type of Work and Project	TEC	FY 1986
Buffalo Bill Dam Modifications (Wyoming)		
Buffalo Bill/Shosone Powerplants	$14,054	$1,511
Modify Dam and Spillway	13,800	50
Relocate Highways (14, 20, and 16)	5,400	3,000
Quarry and Stockpile Riprap	3,430	2,412
Turbines, Generators, and Transformers	3,526	1,606
Garrison Diversion Unit (North-South Dakota)		
James River Clean up/Channel Improvements	8,300	150
Block 1 Irrigation Drains-New Rockford	2,500	50
New Rockford 1B - Lining	4,500	1,700
West Oakes Block 2B Drains	2,100	100
Grand Coulee-Third Powerplant (Washington)		
Overhead Trans Lines 115/230 kV	10,000	500
Area 3, 4, 7, and 8 Cable Installation	1,400	100
Fire Protection for Control Cable Tunnels/Shaft	2,400	400
Fire Protection for 500-kV Cable Tunnels	2,000	100
Headgate Rock Hydroelectric (Arizona)		
Turbines, Generators, and Governors	20,000	700
McGee Creek Project (Oklahoma)		
West Side Road Phase 10A	1,000	50
East Side Road Phase II	3,900	50
Construct Recreation Facilities Phase III (non-Federal participation)	1,000	200
West Side Road Bridge	1,200	50
Sacramento River Division (California)		
Fish Screen/Settling Basin	$ 1,400	$ 646
Tehama-Colusa Canal Headworks Enlargement	1,582	730
San Luis Valley-Closed Basin (Colorado)		
Construct Canals Stage 4 and 5	2,675	50
Construct Laterals Stage 4	3,510	50
Yakima River Basin Fish Enhancement (Washington)		
Prosser Screen and Screen Structure	3,920	2,500
Colorado River Front/Levee System (Arizona-California-Nevada)		
Levee Armoring and Protection Program on Cibola Levee - Heart Mountain Quarry	5,500	2,000
Parker Phase 2 - Hills Ranch Quarry	3,000	3,000
Parker Bankline - Agnes Wilson Quarry	2,000	2,000
Cibola Bankline - Cibola Quarry	1,950	830
Fruitgrowers Dam Project (Colorado)		
Repair Spillway	1,126	901
Heart Butte Unit (North Dakota)		
Heart Butte Modifications	2,420	300
Minidoka-Jackson Lake Dam (Idaho, Wyoming)		
Stabilize Dam	12,000	5,000
Navajo Unit-CRSP (Colorado, New Mexico)		
Major Drainage - Navajo Dam	6,156	2,542

NEW CONTRACTS AWARDS IN EXCESS OF $1 MILLION TOTAL ESTIMATED COST
(Dollars in thousands)

Type of Work and Project	TEC	FY 1986
Title II-Grand Valley (Colorado)		
West End Lateral Lining	$ 2,850	$ 1,367
CUP, Bonneville-Section 5 (Utah)		
Docs Diversion Dam/Feeder Pipe	1,843	442
Rhodes Diversion Dam - Stream Inlet	1,340	251
Jordanelle Pipe Line/Switchyard Relocations	1,078	929
Duchesne River Canal Rehabilitation	23,265	3,000
Syar Tunnel-Dam Roads	2,910	1,132
Monks Hollow Foundation Tunnel	1,000	900
Dolores Project-Section 5 (Colorado)		
South Canal	4,036	1,515
Dallas Creek (Sec. 8 Recreation)		
Ridgway Recreation Facilities	7,266	1,400
CAP (Water) (Arizona, New Mexico)		
Prime Ak Chin Distribution System	5,494	1,663
Completion-Brady Pump Plant	7,315	767
Completion-Pichaco Pump Plant	7,735	811
Completion-Red Rock Pumping Plant	8,950	938
TOTAL	$253,037	$54,102

San Luis Unit, Kesterson Reservoir

Question: Discuss the problems related to the Kesterson Reservoir, including an historical perspective of Kesterson, the scope of the problem, costs, potential economic impact and a realistic assessment of the timeframe that will be necessary to adequately assess the problem, develop a solution, and complete the work. What do you see as a realistic timetable to study the problem and undertake an appropriate solution?

Answer: The west side of the San Joaquin Valley has serious drainage and salt management problems which are having negative impacts on the area's waterfowl and farm production. Several areas are now affected -- either by inadequate drainage of salts and leaching water which has adversely impacted agricultural production and land values or because the disposal of drainage water has adversely affected valley waterfowl. The acreage affected is likely to double in the next few decades and an environmentally and economically sensible means of disposal must be found.

A total of about 251,000 acres is now affected by inadequate irrigation drainage. Drainage water from about 77,000 acres north of Mendota -- about one third of the affected lands -- is discharged into the San Joaquin River, the valley's only natural outlet. Drainage from about 8,000 acres west of Mendota is discharged into Kesterson Reservoir by way of the San Luis Drain. The land needing drainage will increase to 381,000 acres by the year 2020 and 495,000 acres by 2095, or about 40 percent of the land within the service areas.

In the absence of a long-term solution to the drainage problem, irrigated crops will become increasingly threatened by both drainage and salt-disposal problems. As agricultural productivity is reduced, farming will become increasingly uneconomical. As lands go out of production and farms go out of business, service industries and the local tax base will decline, unemployment will rise, and some people will have to leave the area to find work. The local effects will in turn be felt in both the regional and State economies, which are also closely tied to agriculture.

Today, the San Luis Drain transports about 6,500 to 8,500 acre-feet annually of tile drainage water containing a number of naturally occurring trace elements, including selenium, from the equivalent of approximately 8,000 acres in the Westlands Water District to Kesterson Reservoir, which originally had been constructed as a regulating reservoir but now functions temporarily as a terminal reservoir and evaporation pond. Until 1981, there was no indication that, apart from salinity, the constituents of tile drain water might present a toxicity problem.

When high selenium concentrations were first noted in San Luis Drain water in 1981, the Fish and Wildlife Service initiated studies to assess the implications of this for wildlife. In mid-1983 when deformities in some Kesterson waterfowl were observed and preliminarily linked to the ingestion of selenium through the food chain, the Interior Department agencies moved swiftly to assure that Kesterson would pose no threat to public health, wildlife or other aspects of the environment. These efforts were of two types: first, actions to remove immediate risks and assure that no longer-term risk developed; and second, investigations to understand the specific situation at Kesterson and the broader problem of which Kesterson is only a part, so that a long-term, permanent solution can be devised.

Selenium concentrations in the reservoir vary from 60 to 400 ug/L. Of the 66 ground-water samples collected at the 8 to 15 feet level, only four samples have been in excess of the 10 ug/L drinking-water standard, the highest being 29. Additional shallow ground-water wells are being drilled in the vicinity of Kesterson to identify the effect of the seepage on the regional ground-water quality. Domestic and irrigation wells in the vicinity of Kesterson are being monitored. In addition, surface water in the San Joaquin River, Mud and Salt Sloughs, and other waterways are sampled monthly. We have no data from the San Joaquin River which shows selenium levels in excess of drinking water standards.

On February 5, 1985, the State Water Resources Control Board issued Order No. WQ85-1 which directed the Bureau of Reclamation to develop a plan to cleanup and abate within five months and to complete action within three years. A broad range of alternatives for managing the seepage from Kesterson Reservoir are being evaluated. They include upgrading the lining of Kesterson by the compaction of clay materials and the installation of plastic liners. Other alternatives include the elimination of drainage into Kesterson. This can be accomplished by discharging drain flows into the San Joaquin River with the addition of dilution water from the Delta-Mendota Canal or by plugging of the drainage collector systems within Westlands Water District and/or eliminating irrigation deliveries to the lands served by the collector system.

Preliminary cost and time estimates to comply with the Order range from over $550 million and 3-1/2 years to cleanup and double line Kesterson to approximately $150 million and 3 years to discontinue drainage and consequentially take land out of production. We have prepared a low cost estimate of $32 million and 3 yearswhich converts the Kesterson Reservoir into a Class I disposal facility. This option, however, does not fully comply with the SWRCB order. The socio-economic impacts of taking lands out of production are currently being examined. Preliminary results indicate this action would result in a reduction of approximately $100 million annually to the local economy.

Question: Is this confined to the Federal Project, or is the problem occurring in other surrounding areas?

Answer: The drainage and salt management problem exists on most of the west side of the San Joaquin Valley. High levels of selenium have been found in waterfowl in Grasslands, South San Francisco Bay, and Kesterson Reservoir areas. The U.S. Geological Survey (USGS) has conducted a preliminary synoptic survey of ground-water qualities in the San Joaquin Valley. They have sampled both near-surface aquifers and perched water tables and tested waters from several deep underground wells. The purpose of this testing was to characterize the areal extent of selenium concentrations (as well as other chemical constituents). The results of this preliminary study indicated selenium concentrations were highest in the central and southern parts of the alluvial fan and rim zones, and lowest in the northern parts of all zones and in the entire basin trough zone. USGS has proposed finalizing this study over the next three to five years and answering the question of how widespread the selenium and other chemical constituents problem is in the valley. The USGS is also preparing detailed study plans for determining how selenium is mobilized and transported in the ground-water systems. It is expected that this work will culminate in a predictive model which will assist in forecasting how the chemical constituents in ground-water might respond under varying conditions in the future. This work is a prerequisite to detemining the waste load requiring treatment for any alternative strategy selected to correct the drainage problem.

Question: Has this contamination problem been found at any State or local project? If so, what are they doing to address the problem? Have time schedules been imposed on the cleanup of these non-Federal facilities?

Answer: Yes, the Grasslands area has similar problems. Also, several areas of the State project have other contaminants which are of concern to the water pollution control agencies. The difference between State project areas and the Kesterson and Grasslands areas are twofold: (1) no petition has been filed against any State areas, and (2) the Fish and Wildlife Service has identified selenium poisoning as the cause of mortalities of adult waterfowl and the most probable cause of deformities in chicks and embryos at the Kesterson facilities.

With respect to Grasslands, the State Water Resources Control Board found that the quantity and quality of agricultural drainage flows into the district are not well documented, and there is a serious need for additional data in order to adequately characterize these wastewaters. They, therefore, concluded that it is appropriate to gather additional data prior to regulation of the discharges from the draining entities into Grasslands under waste discharge requirements.

Question: Briefly, what would happen if Kesterson is not cleaned up within 3 years as ordered by the State Water Resources Control Board?

Answer: The Department fully intends to comply with the law so that cleanup does occur within the required three years. Our primary goal is to protect the public health and to preserve and enhance wildlife and other environmental values. As a result, the Department is working aggressively to develop options for the implementation plan for protecting the public health and wildlife values in compliance with the SWRCB order (3 years).

Loan Program

Question: I note that the budget for 1986 includes 6 new loan projects. Now, the Congress in action on the 1985 appropriation bill, provided direction to the Bureau of Reclamation to begin some new loan projects in 1985 if possible. What is the status or possibility of beginning some loan projects as indicated?

Answer: The Bureau currently is reviewing the FY 1985 Loan Program to determine if there are funds available that could be used to begin some loans.

Question: Can some of those new loans proposed in the 1986 budget be initiated in 1985? Would there be any budgetary impact on the 1986 request? What saving could be realized if these loans were started in 1985?

Answer: Four of the six loans proposed in the 1986 budget meet all prerequisites and could be started in fiscal year 1985, if funding is available. There will be no budgetary impact on the 1986 request because we do not plan to propose initiation of any new loan in 1985 which would increase the need for budget authority in 1986. There would not be a reduction in the total amount of budget authority required but repayment by the entities on the new initiatives could begin earlier.

Question: Provide for the record a tabulation showing the current status of the loan applications received or those expected to be received in 1985 and 1986. The tabulation should show the category of the loan and the milestones from the letter of intent through submittal to Congress.

Answer: The loan applications received or expected in 1985 and 1986 are reflected in the following tabulation:

PROCESSING HISTORY OF CURRENT PUBLIC LAW 84-984 LOAN APPLICATIONS

District	Notice of Intent Received	Draft Application Received	Final Review or reply Letter dated	Final Application Received	Submitted to Commissioner	Commissioner's Letter to Secretary	Approved by Secretary and Submitted to Congress
Greater Wenatchee ID, WA	4-18-80	10-27-80	9-04-81	7-05-83	10-12-83	11-22-83	11-28-83 1/
Revised for Category I					10-31-84	12-21-84	12-21-84
Rancho, CA (Revision)	5-11-81	6-14-84	7-19-84 8-02-84	8-30-84	11-8-84	1-30-85	2-4-85
Elsinore Valley MWD, CA (Revision)	1-26-81	3-29-84	5-08-84 8-27-84	9-21-84	2-6-85 2/	---	---
Gila River Farms Sacaton Ranch, AZ (Supplemental)		4-04-84	5-14-84	---	5-22-84	6-11-84	7-27-84 3/
United CD, CA	12-13-82	7-05-83	8-16-83	11-14-83	4-19-84 4/	---	---
San Bernardino County, CA	12-18-81	12-05-83	2-23-84	---	---	---	---
Santa Clara Valley WD, CA	12-23-77	8-09-82	9-30-82	---	---	---	---
Middle Creek Dam Project, MT	10-24-83	10-12-84	12-20-84	---	---	---	---
Pixley ID, CA	5-20-83	7-27-84	9-10-84	---	---	---	---
Upper Yampa, CO	6-20-83	---	---	---	---	---	---

1/ Category II loan submitted to OMB on November 28, 1983. Rejected by OMB on May 31, 1984.

2/ FONSI received February 28, 1985

3/ Category II loan submitted to OMB on July 27, 1984. Rejected by OMB on February 12, 1985.

4/ On June 26, 1984 it was concluded that an Environmental Impact Statement was required. That document is being prepared. The draft is scheduled for publication in the Federal Register in August 1985.

Except as noted in footnotes 1/ and 3/ all loans are category I

Auburn Dam, California

Question: I believe there is an appropriations ceiling problem and on-going studies which must be resolved before activities related to Auburn Dam can resume. Bring the Committee up to date on this project and indicate the milestones for resolving these issues that still surround Auburn Dam.

Answer: The Auburn Dam project as presently authorized will exceed the appropriation ceiling. Discussions currently are underway with local entities regarding cost sharing for the project. If such discussions are successful, appropriate cost ceiling legislation will be forwarded for congressional consideration.

The State/Federal Auburn Dam Task Force was organized in January 1984 to examine cost-sharing options for financing Auburn Dam. The Task Force will assist in developing detailed financial plans and make recommendations of possible contractual/organizational mechanisms for completion of Auburn Dam with non-Federal cost sharing entities.

Analyses will include operation studies and conjunctive use options, power evaluations including pump storage, completing necessary cost estimates, developing and evaluating financial options, and a value engineering analysis of the project. We plan to initiate contract discussions with potential partners in the late summer of 1985 and completion of contract drafts in fiscal year 1986.

The Folsom South-Lower American River Studies are being updated and will provice the basis for legislation amending the authorized act of 1965. Those studies will be completed in mid-fiscal year 1985.

Appropriations Ceilings

Question: What are the projects included in the 1986 budget that will require the enactment of authorizing legislation to raise the appropriations ceiling before the projects can be completed? Provide for the record a specific schedule, assuming current conditions, that shows when each project is expected to exceed its ceiling and the expected milestones through enactment of the required legislation.

Answer: The Congress is kept informed about the relationship between Federal obligations and appropriation ceilings through the budget process. In addition, as a result of hearings before the House Government Operations Committee, we have been following procedures agreed to with the General Accounting Office on appropriate notification to the Congress, the timing of such notices, and submission of legislation to increase the appropriation ceiling. We also follow the policy of not initiating construction on a separable feature of a project if that feature would cause the appropriation ceiling to be exceeded.

The following summarizes the current status of the projects with respect to the concerns that you raised:

Auburn Folsom South Unit, Central Valley Project. The project as presently authorized will exceed the appropriation ceiling. Discussions with local entities are underway regarding cost sharing. Providing such discussions are successful, appropriate legislation will be forwarded for congressional consideration.

San Luis Unit, Central Valley Project. The appropriations for the Federal and joint-use facilities are adequate to cover the construction currently proposed. The appropriations authorized for the Distribution and Drainage System are insufficient for facility construction. Because of serious drainage water quality problems an extensive study program is presently underway. The Secretary has made a decision of an emergency situation in this matter in accordance with Section 201 of Title II of Public Law 98-360, and $5,795,000 has been transferred in fiscal year 1985 to the San Luis Unit in excess of the appropriation ceiling. The $12,490,000 for the San Luis Unit included in the fiscal year 1986 request is also in excess of the appropriation ceiling. A legislative proposal for additional appropriation ceiling to accomplish the necessary studies and initiate corrective measures will be forwarded in the near future.

Oroville-Tonasket Unit, Chief Joseph Project. The estimated cost exceeds the authorized appropriation ceiling and Reclamation is preparing a letter to the appropriate committees advising them of the situation. Legislation to increase the appropriation ceiling is being developed and will be submitted in the near future.

Title I and II Divisions of the Colorado River Basin Salinity Control Projects. Title I authorized appropriations are within 5 percent of the currently estimated cost. We do not feel that the estimated cost data are firm enough to determine if additional appropriation ceiling is needed at this time. We will analyze this periodically and, if the estimated cost exceeds the appropriation ceiling by the amount of the contingencies in the estimate, legislation will be forwarded for congressional consideration.

The fiscal year 1986 Budget Justifications for Title II, Colorado River Basin Salinity Control Projects, show that the appropriation ceiling is $296,576,000 as of October 1985. Appropriations through fiscal year 1985 total approximately $71 million and the fiscal year 1986 request includes approximately $5.4 million for Title II. Because of several issues that are not yet resolved, it appears premature to submit legislation to increase the appropriation ceiling.

Garrison Diversion Unit. The amount authorized for appropriation for the Garrison Diversion Unit in 1965 (Public Law 89-108), indexed to October 1985 prices is $1,096,108,000. The estimated cost of the authorized Garrison Diversion Unit presently exceeds this amount. Modification of the project as recommended by the Garrison Diversion Unit Commission would result in a change in the project costs. We are still in the process of assessing the commission recommendations and determining applicable cost estimates. Legislation will be required to authorize certain commission recommendations, not within the existing authority, which could include language to adjust the appropriation ceiling if necessary.

North Loup Division. On February 10, 1981, Congress was advised of the possible need for additional appropriation ceiling for this project. It has now become clear that design changes on major features have made additional ceiling necessary after fiscal year 1986 and a legislative proposal to authorize an increase in ceiling is being prepared by the Bureau.

O'Neill Unit, Pick-Sloan Missouri Basin Project. The Congress was advised on February 12, 1981, of the appropriation ceiling status of this project. Last year Congress directed a State-led alternative study which was submitted to the Congress on January 31, 1985. When agreement is reached with the local entities on a revised project plan, an appropriate legislative proposal will be prepared.

Colorado River Storage Project, Central Utah Project. The appropriations authorized for the Unit are insufficient to cover the estimated cost. Appropriate congressional committees were advised on June 26, 1983, concerning our proposed course of action. Copies of the letter were also sent to the congressional delegations of the affected States. We note that since that time the estimated cost of the project has decreased primarily due to redesign of features. We are exploring non-Federal participation that may reduce Federal obligations. Appropriate legislation will be submitted to the Congress when these matters are resolved.

Washoe Project. The appropriation ceiling for the Washoe Project at October 1985 price levels is $189,913,000. The total estimated Federal obligations to complete the project as presently authorized are $353,088,000. However, the Watasheamu Division has been found to be economically infeasible and there are currently no plans for construction. Total Federal obligations through September 30, 1985, are estimated to be $40,589,000.

Narrows Unit. At the present time there are two issues that affect the cost estimate of the Narrows Unit. A mitigation plan for the protection of the endangered whooping crane must be formulated and negotiations for non-Federal financing by the State of Colorado and others must be completed. Since this Unit is in the preconstruction category and until these issues are resolved, it is considered premature to submit legislation to the Congress to increase the appropriation ceiling.

New Plan Formulation and Advance Planning Studies

Question: Funds amounting to $2.5 million are budgeted to begin new plan formulation and advanced planning studies in 1986. To what projects do you expect to allocate the $2.5 million?

Answer: There are ten proposed plan formulation and two advance planning new starts. Summarized below is a list of the proposed studies along with the fiscal year 1986 funding request.

Project	FY 1986
Plan Formulation	
1. Cross Delta Constriction Investigation, California	$ 250,000
2. Delta Support Studies, California	322,000
3. Groundwater Recharge Demonstration Program	325,000
4. High Mountain Aquifer Study, Colorado	100,000
5. Kansas River Basin Water Study, Kansas	115,000
6. Offstream Storage, California	150,000
7. Refuge Water Supplies, California	80,000
8. San Juan River Unit (CRWQIP) Colorado, Utah, New Mexico	223,000
9. Spring Canyon Pumped Storage Project, Arizona	240,000
10. Umpqua River Basin Water Resources Management Investigation, Oregon	170,000
Advance Planning	
1. Minidoka Project, North Side Pumping, Idaho	225,000
2. All American Canal Relocation, California	300,000
	$2,500,000

Question: Is the use of any of the $2.5 million contingent upon enactment of authorizing legislation?

Answer: There are no study authorizations needed for the FY 1986 General Investigation new starts. The two new advance planning starts have been authorized in the past under feasibility studies previously conducted, and the ten new project investigations do not need specific authorization at this time.

Question: Briefly, describe the new plan formulation and advance planning studies you hope to initiate in fiscal 1986.

Answer: A brief description of the 12 new studies follows.

Plan Formulation

1. Cross Delta Constriction Investigation, California - The purpose of the investigation is to formulate a plan acceptable to the public, which would make it possible to deliver needed additional quantities of Sacramento River water to the export pumps located on the southside of the Delta while maintaining beneficial water use and the environment in the Delta.

2. Delta Support Studies, California - Twelve counties and several bodies of water in the Sacramento/San Franciso area are included in the study area. Four State and Federal agencies have combined efforts to study the ecological effects of water development on the Sacramento-San Joaquin Estuary, in order to define operation and maintenance procedures and fish preservation measures to be used in further water management of the critical aquatic environment.

3. Groundwater Recharge Demonstration Program - The purpose of the groundwater recharge demonstration program is to study the potential for groundwater recharge in the 17 Western States and to demonstrate artificial recharge technologies under a variety of hydrogeologic conditions. This program will be a two-phased program: Phase I, the planning, development, and site selection phase; Phase II, the design construction, data-gathering, and evaluation phase.

4. High Mountain Aquifer Study, Colorado - The primary objective of this investigation will be to determine the viability of using underground glaciofluvial strata in the high mountain valleys of Colorado as storage reservoirs.

5. Kansas River Basin Water Operations Study, Kansas - This study will be designed to review possibilities for increasing watershed yield through improved resource allocation. Consideration will be given to the physical, economic, social, and political aspects of water resources management.

6. Offstream Storage, California - The study area includes various offstream reservoir sites in the Central Valley that have been evaluated in the past as a part of studies which have been deferred or discontinued, but which could present an opportunity for increasing water supplies.

   Offstream storage has a potential to serve most of the needs which an onstream reservoir would serve, depending upon the sites—including additional water supplies, recreation, and replacement of supplies lost for fishway uses. Additionally, depending on location, offstream storage has the potential to expand the delivery capability of the conveyance systems being planned to serve the San Joaquin Valley.

   With offstream storage, surplus water could be pumped from the Sacramento River or the Delta during times when the system was operating at less than maximum capacity, stored until needed, and then delivered.

7. Refuge Water Supplies, California - The Bureau will study methods by which water and power supplies can be conveyed to meet the needs of refuge areas including: disease suppression and control, water quality, timing of water deliveries, wildlife food production, food accessibility, hunting, fishing, trapping and other recreation, rising refuge costs, and water and power conservation efficiencies.

8. San Juan River Unit, CRWQIP, Colorado, New Mexico, Utah - Data indicated a concentration of salinity producing sources, which need to be identified and eliminated. Results of this study could further the achievements of reducing the salinity of the Colorado River system.

9. Spring Canyon Pumped Storage Project, Arizona - The objective of this investigation is to develop a plan for a pumped storage project to produce new generating capability to meet anticipated peaking power requirements in the Pacific Southwest marketing area. The project could provide for an ultimate capability to produce between 1,000 and 4,000 MW of peaking power.

10. Umpqua River Basin Water Resources Management Investigation, Oregon - This study is necessary to help provide for orderly, multipurpose water resources development in the Umpqua River basin. The main purpose of the study will be to determine resource capability. The program will define multipurpose water needs and concurrently determine if the various demands can be reduced or present levels of water utilization improved. Opportunities for new water storage facilities and non-storage measures will be identified and evaluated.

Advance Planning

1. Minidoka Project, North Side Pumping Division Extension, Idaho - A preferred plan for the North Side Pumping Division Extension was identified in the Plan Formulation Working Document of January 1984. The lands under study are operating lands for Reclamation's existing North Side Pumping Division. In addition, 3,800 acres of Bureau of Land Management lands in the vicinity are being considered for inclusion in the Extension plan with the concurrence of that agency. Under the preferred plan, the Extension lands would be developed and managed to, in effect, complete the development of the existing North Side Pumping Division. The plan would meet State and Federal objectives by preserving and enhancing wildlife habitat and by providing additional irrigation development. Replacement water supplies would be provided to 810 acres of irrigated A&B Irrigation District lands which now have an unreliable water supply. Other resource needs are also being evaluated.

2. All American Canal Relocation, California - The prime alternatives under consideration at this time are a new lined canal to be built adjacent and parallel to the existing alignment and well field adjacent to the canal. Either alternative or a combination of the two would provide opportunity to make beneficial use of the seepage water which now flows underground into Mexico. It is estimated that nearly 94,000 acre-feet of water a year can be saved by lining the canal or by installation of a well field, and 121,000 acre-feet can be saved through a combination of pumping and lining. Either alternative would provide an opportunity to make beneficial use of water which currently recharges ground water aquifers in Mexico.

Flooding Potential

Question: Bring the Committee up to date on the flooding situation along the Colorado River, including the status of repairs to Reclamation flood control and related facilities. What are the current snow pack conditions and the potential for additional high flows and flooding later this Spring? What actions are being taken to minimize damages?

Answer: Spring runoff in the Colorado River Basin is currently forecast to be about 150 percent of normal. That compares to 1983 runoff of 194 percent of normal and 1984 runoff of 205 percent of normal. Snow accumulation in the basin was heavy in November and December 1984, but was slightly below normal in January 1985 and near normal in February 1985. Flood control releases of 28,000 cubic feet per second have been made from Hoover Dam in January and February. Those flows have caused no serious flooding. We plan to begin gradual reductions in Hoover releases in March, and thus the 28,000 cubic feet per second flows over the past two months are likely to be the maximum flow along the lower Colorado River in 1985. Peak flows in 1983 were about 44,000 cubic feet per second, and 1984 flows peaked at 35,000 cubic feet per second. As of March 1, there is about 8.6 million acre-feet of flood control space in the reservoir system. Given that amount of storage space and the current runoff forecasts, the potential for serious flooding along the lower Colorado River in 1985 is low.

Repairs and modifications of the damaged Glen Canyon Dam spillways were completed in the Summer of 1984. A test of the spillway at Glen Canyon Dam indicated that the installed airslots worked as expected in eliminating cavitation during spillway releases. We plan to make similar modifications on the Hoover Dam spillways beginning in October 1985. We are continuing with our ongoing program of levee improvements along the river. Damage to the levee system as a result of the high flows of 1983 and 1984 was generally not extensive and is being repaired.

Working Capital Fund

Question: A General Provision of the fiscal year 1986 budget for the Department of the Interior proposes new language which would establish a Working Capital Fund for the Bureau of Reclamation. Could you briefly describe the concept behind this and how the fund would work?

Answer: The working capital fund involves the concept of an equitable distribution of costs through a separate revolving fund to finance support services provided to all Bureau offices, other agencies, and non-Federal entities. These services would be financed by the working capital fund and the cost of providing the services, including any depreciation, would be billed to the customer. Payments for the services would be deposited in the working capital fund. These services are continuous and are provided to many users.

Question: How will this change existing operational and administrative procedures?

Answer: Utilization of the fund will have little effect on operations. Administrative procedures would be streamlined requiring that only one set of accounts be maintained and a single budget presented for all activities associated with the the fund. Replacement of working capital fund assets would be accomplished without imposing a requirement for additional appropriations except those to offset inflation of costs.

Question: Why do you now find it necessary to establish this Fund? What adverse impact has not having this Fund had on your ability to carry out your responsibilities in an effective way?

Answer: Equipment is now charged to a particular appropriation or project or projects even though the equipment may be used for a number of years in providing services to other appropriations and projects and non-Bureau entities. Using the working capital fund, equipment will be purchased by the fund, be depreciated over its useful life, and the depreciation will be included in the charges to the benefitting project or other entity. Financing will be simplified and the cost of providing the services will be distributed more equitably. In addition, the cost of equipment and other resources used to provide these services will be consolidated in the accounts and in the budget presentation, thus simplifying financial management.

The Working Capital Fund would also avoid an unintended nonreimbursable benefit now conferred on projects. Major equipment now purchased with nonreimbursable General Administrative Expense appropriations would be purchased with working capital funds and be reimbursable to the extent the equipment is used for reimbursable project purposes.

The Senate Appropriations Committee Report on the fiscal year 1983 Energy and Water Resources Appropriation Bill (page 235) indicated a need for a Working Capital Fund.

The absence of a working capital fund has not affected performance of the Reclamation program. It has, however, resulted in an imperfect system for financing certain centrally located services used Bureauwide. In recent years, beneficiaries have demanded that project costs be more precisely identified with regard to indirect costs. Utilization of the working capital fund will increase the accuracy of such charges.

In recent years, the Bureau has also been providing an increasing amount of ADP services for other bureaus, departments, and agencies, such as centralized payroll services, and the working capital fund would provide a sound mechanism for recovering the capital and operating costs of providing these services.

Question: Please include in the record the specific legislation along with a paragraph by paragraph analysis.

Answer: Section 205 of the General Provisions, Department of the Interior, includes authorizing language for the Bureau's working capital fund:

> (a) Within 30 days after enactment of this bill, there shall be established in the Treasury of the United States a working capital fund to assist in the management of certain support activities of the Bureau of Reclamation (hereafter referred to as the Bureau), Department of the Interior. The fund shall be available without fiscal year limitation for expenses necessary for furnishing materials, supplies, equipment, work, and services in support of Bureau programs, and, as authorized by law, to agencies of the Federal Government and others. Such expenses may include the acquisition, replacement, and operation of a central computer and related automatic data processing equipment; engineering services; payroll and other management services; acquisition and replacement of equipment and facilities, including the purchase, lease, or rent of motor vehicles and aircraft within any limitations set forth in appropriations made to carry out the functions of the Bureau and such other activities as may be approved by the Director, Office of Management and Budget.

This paragraph would establish the fund and allow it to operate as a revolving fund so that acquisitions and replacements can be made without further appropriations.

This paragraph also prescribes the types of activities to be financed and provides that annual appropriation act administrative provisions such as those for the acquisition of aircraft and automobiles will be binding on the working capital fund.

> (b) The fund shall be credited with appropriations made for the purpose of providing or increasing capital. There are authorized to be transferred to the fund (at fair and reasonable value at the time of transfer) the inventories, equipment, receivables, and other assets, less the liabilities, related to the functions to be financed by the fund as determined by the Secretary of the Interior.

This paragraph prescribes the sources of capital for the fund namely appropriations and non-project equipment and other assets used in providing the services.

> (c) The fund shall be credited with appropriations and other funds of the Bureau, and other agencies of the Department of the Interior, other Federal agencies, and other sources, for providing materials, supplies, equipment, work, and services as authorized by law. Such payments may be made in advance or upon performance.

The purpose of this paragraph is to permit the charges for services provided to be credited to the fund to finance the activities that are carried out. The payments may be made in advance or upon performance.

> (d) Charges to users will be at rates approximately equal to the costs of furnishing the materials, supplies, equipment, facilities, and services (including such items as depreciation of equipment and accrued annual leave).

This paragraph establishes the basis on which charges to users will be determined. Essentially rates will be on an actual cost basis.

> (e) There are hereby authorized to be appropriated such sums as are necessary to carry out the purposes of this section.

This paragraph authorizes appropriations to the fund. No appropriation is requested for fiscal year 1986, and any appropriations made to the fund would be reimbursable to the Treasury by beneficiaries pursuant to existing law.

(f) Funds that are not necessary to carry out the activities to be financed by the fund, as determined by the Secretary, shall be covered into miscellaneous receipts of the Treasury.

In the event that the need for fund diminishes, unneeded capital would be returned to the Treasury under this paragraph.

Central Arizona Project

Question: Last year, you provided a schedule for completion of the EIS on Phase B of the Tucson Aqueduct. Has there been any or do you anticipate any change in that schedule which indicates a record of decision in September 1985?

Answer: No. The schedule remains the same.

Question: Based on the September date, what funding would be needed to initiate construction on Phase B of the Tucson Aqueduct and when would you be in a position to award such a contract?

Answer: Based on a September 1985 Record of Decision date, a cultural resources mitigation contract would be awarded in September 1985. The mitigation contract is required before a construction contract can be awarded. Reach 4 land acquisition will be completed in early 1986. The first construction contract, Reach 4, would be awarded in June 1986. The second contract, Twin Peak and Sandario Pumping Plants, would be awarded in July 1986.

Question: Does the Bureau of Reclamation have the freedom and flexibility to use savings or funds from work experiencing delays to undertake new contract work?

Answer: The Bureau does have the ability to transfer funds for work previously approved by Congress within certain funding limits established by the Appropriations Committees.

Question: There is always concern from year to year as to the impact the reduction identified for savings and slippage will have on the Central Arizona Project. Of the $112 million adjustment for savings and slippage, what portion has been assigned to the CAP?

Answer: $29 million or about 26% of the fiscal year 1985 Construction Program underfinancing was allocated to the Central Arizona Project.

Question: Will this have any impact on critical path work?

Answer: Due to savings from favorable bids and uncontrollable slippage in both fiscal years 1984 and 1985, no delay on critical or non-critical work will result from underfinancing applied to the Central Arizona Project. In fact, some work formerly scheduled for award in fiscal year 1986 has been accelerated into 1985.

Question: Does the savings and slippage amount identified at the start of the year change? Explain how you accommodate or adjust such amounts during the year.

Answer: No. Because the funds appropriated by Congress are less than the work scheduled, the underfinancing must be distributed before the funds can be allocated to each project at the beginning of the fiscal year. The application of underfinancing to the various projects is the way the Bureau reconciles programmed work, as described in the budget or added to the program by Congress, and appropriated funds. After underfinancing is distributed at the start of the year, the activities on the projects continued to be reviewed throughout the year in order to balance funds between projects with additional needs and with those with additional slippage. The method used to adjust program savings and slippage is through the transfer of funds or reprogramming when the amount exceeds the transfer limitation authority of the Commissioner.

Question: What portion of the $79 million budgeted for savings and slippage is expected to be allocated to the CAP?

Answer: The assignment of underfinancing is not determined until Congress passes the appropriation bill for the new fiscal year. Prior to the beginning of the fiscal year we review the work on the construction program. If we find work slipping or savings become known on new contract awards, we target those projects to absorb an appropriate amount of the underfinancing. Theoretically speaking, each project could be asked to absorb an underfinancing amount of 13% to cover the $79,000,000. However, when the final decision is made we would assess certain projects to take more underfinancing to the extent that those projects have a larger rate of slippage in past years.

Question: The budget justification shows four main area of funding priority, namely; Regulatory Storage, Tucson Division, Indian Distribution Systems, and Non-Indian Distribution Systems. Briefly, is it possible to shift the emphasis from one of these areas to another without significant adverse impact?

Answer: On a project as complex as the Central Arizona Project it is almost always possible to shift emphasis between features. The impact of such a shift would have to be recognized and managed to avoid any significant adverse impact.

Question: Specifically, is the Regulatory Storage work on the critical path for water delivery to Tucson? Could funds be shifted from this activity without an adverse impact on initial project operations.

Answer: Funds can be shifted from Regulatory Storage to the Tucson Aqueduct without a significant adverse impact on initial project operations. The Regulatory Storage Division work is not on the critical path for initial water delivery to Tucson; however, it is essential for long-term project water deliveries to users in areas south and east of New Waddell Dam. The Regulatory Storage Division is important to the overall CAP. It provides long term storage capability to all users along the aqueduct. It provides a significant amount of system reliability that would not exist on a pump-ondemand aqueduct system. The existence of regulatory storage also increases the amount of Colorado water that can be pumped into Central and Southern Arizona. Finally, the construction of New Waddell Dam would increase repayment by allowing the sale of very valuable firm energy and capacity during the peak summer energy use period in exchange for pumping into New Waddell Dam and Reservoir during the winter, a period of low energy use.

Question: Would it be possible for the Bureau of Reclamation to reallocate the $173.5 million budget request to allow for the award of Phase B of the Tucson aqueduct without any major project impact?

Answer: Yes, there is a possibility that we could provide the needed additional $4 million for Phase B awards without any major project impact. Funds can be acquired from savings on other CAP contract awards, from preconstruction work scheduled on the Regulatory Storage Division, and from scheduled work or savings on other projects.

Atmospheric Water Resources Management Program

Question: What is the status of the Sierra Cooperative Pilot Project?

Answer: The Sierra Cooperative Pilot Project (SCPP) is now performing the third year of a 5-year randomized seeding experiment on wintertime cumulus and orographic clouds. Remote sensing equipment is used to identify promising conditions for seeding, while suspension criteria are carefully followed to avoid the appearance of contributing to hazardous weather conditions. The SCPP scientists are using a computer model to target additional snowfall produced by seeding onto a specific part of the American River Basin near Kingvale, California.

Effects of seeding are investigated by aircraft penetrations of target clouds and by observing precipitation rates and snowflake concentrations at the ground. Aircraft flights to investigate clouds over the Feather River Basin are also being made at the request of the California Department of Water Resources, and the University of Nevada has expanded research into seeding effects east of the Sierra Nevada.

Question: Is the 1986 budget request of $2.5 million sufficient to continue an effective study effort on the effects of cloud seeding on Nevada Water Resources which was begun during the current year?

Answer: The $2.5 million proposed funding will necessitate reducing the scope and activity of the project. Specifically, the SCPP multi-year investigation of inter-State effects of cloud seeding activities in California on Nevada Water Resources, begun in FY 1985 under agreement with the Desert Research Institute of Nevada, will be eliminated in FY 1986. In addition to impacting the studies of downwind effects, loss of the Institute's participation will also eliminate some radar support and snow chemistry studies.

Fiscal Year 1986 Capabilities

Question: Provide for the record a tabulation which shows the Bureau's individual funding capabilities for all studies, planning, and construction projects for 1986.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

Additional Capability for
Projects in the FY 1986 Budget

(dollars in thousands)

Appropriation/Project	Fiscal Year 1986 Request Federal	Non-Fed	Total	Add. Capabilities Sub. Federal	Non-Fed	Total	Total Capability Federal	Non-Fed	Total
GENERAL INVESTIGATIONS									
Project Investigations									
Deep Carbonate Aquifer Project	750	750	1,500	119	281	400	869	1,031	1,900
Imperial Irrigation District Canal Lining and System Improvement	200	200	400	58	-50	8	258	150	408
Umatilla Basin Project	125	0	125	125	0	125	250	0	250
Engineering and Research									
Atmospheric Water Resources Management Program	5,000	0	5,000	2,120	0	2,120	7,120	0	7,120
Program Related Engineering and Scientific Studies (PRESS)	4,900	0	4,900	1,100	0	1,100	6,000	0	6,000
TOTAL, ALL G. I. PROJECTS WITH ADDITIONAL CAPABILITY	10,975	950	11,925	3,522	231	3,753	14,497	1,181	15,678

Appropriation/Project	Fiscal Year 1986 Request Federal	Non-Fed	Total	Add. Capabilities Sub. Federal	Non-Fed	Total	Total Capability Federal	Non-Fed	Total
CONSTRUCTION									
Regular Construction:									
Central Arizona Project Non-Indian Distribution Systems	38,800	9,783	48,583	8,251	337	8,588	47,051	10,120	57,171
Central Valley Project:									
Miscellaneous Proj. Programs (El Dorado Irrig. Dist., Unit 4)	1,063	120	1,183	1,025	0	1,025	2,088	120	2,208
(Trinity River Basin Fish & Wildlife Management)				(905		905)			
Colorado River Basin Development Fund:				(120		120)			
Central Arizona Project	134,700	0	134,700	12,453	0	12,453	147,153	0	147,153
Colorado River Salinity Control Project:									
Grand Valley Unit	3,505	0	3,505	1,150	0	1,150	4,655	0	4,655
Paradox Valley Unit	1,782	0	1,782	3,600	0	3,600	5,382	0	5,382
Colorado River Storage Project:									
Dolores Participating Project	24,440	0	24,440	6,260	0	6,260	30,700	0	30,700
Recreational and Fish and Wildlife Facilities	5,725	0	5,725	5,556	0	5,556	11,281	0	11,281
Headgate Rock Hydroelectric Project	1,000	0	1,000	7,000	0	7,000	8,000	0	8,000
Pick-Sloan Missouri Basin Program, North Loup Unit	21,749	500	22,249	5,000	0	5,000	26,749	500	27,249
Rehabilitation and Betterment:									
Okanogan Project, Okanogan Irrigation District	1,357	0	1,357	1,000	0	1,000	2,357	0	2,357
Drainage and Minor Construction:									
Colorado River Front Work and Levee System	17,371	0	17,371	2,000	0	2,000	19,371	0	19,371
Safety of Dams:									
Stewart Mountain Dam	600	0	600	1,600	0	1,600	2,200	0	2,200
TOTAL, ALL CONSTRUCTION PROJECTS WITH ADDITIONAL CAPABILITY	252,092	10,403	262,495	55,920	337	56,257	306,987	10,740	317,727

Appropriation/Project	Fiscal Year 1986 Request Federal	Fiscal Year 1986 Request Non-Fed	Fiscal Year 1986 Request Total	Add. Capabilities Federal	Add. Capabilities Non-Fed	Add. Capabilities Sub. Total	Total Capability Federal	Total Capability Non-Fed	Total Capability Total
OPERATION AND MAINTENANCE									
Colorado-Big Thompson Project	5,761	1,436	7,197	470	0	470	6,231	1,436	7,667
Yuma Area Projects	10,570	0	10,570	2,427	0	2,427	12,997	0	2,427
TOTAL, O & M PROJECTS WITH ADDITIONAL CAPABILITY	16,331	1,436	17,767	2,897	0	2,897	19,228	1,436	20,664
GENERAL ADMINISTRATIVE EXPENSES									
Central Computer System Replacement	2,500	0	2,500	24,850	0	24,850	27,350	0	27,350
TOTAL, ALL APPROPRIATIONS	281,890	12,789	294,687	87,189	568	87,757	368,062	13,357	381,419

Aquatrain Studies

Question: Could you update the Committee on the Bureau's work related to the Aquatrain Project?

Answer: As you know, when Aquatrain was first proposed, saline water was to be the medium for transporting coal. However, the concept was changed in 1983, when we learned that liquid carbon dioxide transport was not only more efficient, but also would eliminate many problems involved with water-based slurries. As a result of this change Aquatrain, Inc. has changed its name to Western Resources Transport, Inc. The Aquatrain Project becomes Westrans and Saline Water Use and Disposal Projects.

Salinity control is still very much a part of Westrans. The need to control damaging saline water in the Colorado River Basin was and continues to be Reclamation's primary basis for participation in this joint effort with private industry. The goal of Western Resources Transport, Inc. in attaching a salinity control function to the coal transport project is to entice government participation in the slurry pipeline and enhance possibilities for its success through this participation. A multipurpose project which includes salinity control can provide the company with a higher expectation that the project will be built. Also, some possibility exists that saline water projects may be developed as economic ventures. That is, saline water use in industry may generate income which could be returned in part to Western Resources Transport, Inc., for money the firm has invested in salinity control.

Reclamation has spent considerable time determining if possible beneficial uses exist for the saline water. In 1984, we initiated discussion with potential industrial saline water users in Wyoming, Colorado, and Utah. We learned that the water could be used for such purposes as powerplant cooling, oil shale recovery, and potash solution mining if the inplant costs could be controlled. Utah Power and Light, Pacific Power and Light, Union Oil, and Texasgulf were among those contacted to determine feasibility, costs, and possible interest in jointly investigating saline water uses. A study is now underway to establish the cost of using Big Sandy water at Jim Bridger Powerplant for cooling. Also, studies on use of Glenwood-Dotsero Springs water in the oil shale recovery process and solution mining of potash are in the negotiation stages. From this work, we feel that possible uses for saline water exist, and Western Resource Transport, Inc., agrees. We now want to identify feasible opportunities and will devote resources to determine costs and time frames for implementation.

The project also meets an Interior Deparment goal to develop Federal coal. Today's high transportation costs make this coal largely noncompetitive on the export market, a situation which would be solved by economical pipeline transport. Subsequently, the U.S. economy and in particular the economy of the West would be stimulated through jobs provided by pipeline construction, mining, and related activities, as well as coal and carbon dioxide royalties deposited to the Federal Treasury. International relations and the balance of trade with Japan would be improved by their purchase of 10 to 15 million tons of coal per year. This trade deficit is now running between $30 and $50 billion annually. Other benefits would be realized as the carbon dioxide transport medium will be separated from coal at the pipeline's terminus, making it available for enhanced oil recovery in the Los Angeles Basin. Use of this resource could increase U.S. oil recovery by approximately one billion barrels, further decreasing the need for foreign imports and helping to protect the Nation strategically from future oil embargoes.

Question: What funding is included in the 1986 budget for this project and under what item?

Answer: Funding for this activity is under General Investigations as follows:

Program Item	FY 1986 Amount
Colorado River Water Quality Improvement Program Saline Water Use and Disposal Opportunities Unit - Aquatrain - Project Investigation	$200,000

SAFETY OF DAMS--MODIFICATION REPORTS AND PRECONSTRUCTION PLANNING

Question: In the 1986 budget it is stated that you plan to install early warning systems under the modification reports and preconstruction activity line item. Why is this necessary?

Answer: As we identify dams with safety deficiencies under the Safety Evaluation of Existing Dams Program, it often takes several years to investigate the deficiencies, select alternatives for modification, prepare designs, and finally construct the modification. For the protection of the public near or downstream of a potentially unsafe structure, we propose to install early warning systems, where appropriate. We are curently evaluating the need for such systems at various dams and developing criteria for their design and installation. We also foresee that installation of an early warning system may be more appropriate in place of a more costly structural modification at some dams with low hazard or remote risk of failure.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM

Question: What is the status of the Colorado River Augmentation Demonstration Program?

Answer: The Colorado River Augmentation Demonstration Program is concentrating on collecting the information needed to improve and refine cloud seeding technology as it applies to Colorado River Basin. Work is progressing to document naturally occurring conditions and assess the relative effectiveness of equipment and procedures for recognizing and responding to seeding opportunities. These field research studies are vital to the development of minimum-cost cloud seeding strategies. Environmental data collected and research studies conducted in support of this program are needed for a variety of cross-disciplinary efforts including operational flood forecasting, assessing avalanche potential, and in investigation of acid precipitation.

PERMANENT APPROPRIATION--BOULDER CANYON PROJECT, ARIZONA-NEVADA

EXPLANATION OF CHANGES IN LANGUAGE AND FINANCING

Question: Public Law 98-381, Hoover Dam Powerplant Act of 1984, authorized a permanent appropriation for Boulder Canyon Project. How was this handled in the budget?

Answer: The following language was deleted from the Operation and Maintenance appropriation: . . . Provided further, that of the total appropriated, such amounts as may be required for the Boulder Canyon Project shall be derived from the Colorado River Dam Fund and such amounts as may be required for replacements which would require readvances to the Colorado River Dam Fund under section 5 of the Boulder Canyon Project Adjustment Act of July 19, 1940 (43 U.S.C. 618d), are to be considered as though readvanced under said section: . . .

Beginning in fiscal year 1986, the operation and maintenance and replacements portion of the Boulder Canyon Project, previously shown under the Operation and Maintenance annual appropriation, is included in the Colorado River Dam Fund schedules. This change is a result of Public Law

98-381, which authorizes all receipts from the Boulder Canyon Project to be paid into the Colorado River Dam Fund and be available without further appropriation for operation and maintenance and replacements of the Boulder Canyon Project and for other purposes.

This language also provided for readvances to the Colorado River Dam Fund for the replacement program. It is not needed in fiscal year 1986 since sufficient funds are expected to be available in the Colorado River Dam Fund for the replacement portion of the uprating program.

MODIFICATION OF HOOVER DAM SPILLWAYS

Question: Why are you planning to proceed in FY 86 with repair and modification work on the Hoover Dam spillways?

Answer: The spillways sustained minor damage from cavitation and erosion during spillway releases required to handle the high 1983 spring Colorado River runoff. The damage was similar to that which occurred at Glen Canyon Dam, but of a much smaller magnitude. While repair of the Hoover spillways is not considered emergency work, as was repair of the Glen Canyon spillways, more serious damage may occur if high spillway releaes have to be made. We delayed construction until the repair and modification work at Glen Canyon was completed and successfully tested.

ECONOMIC BENEFITS OF THE FEDERAL BUREAU OF RECLAMATION PROGRAM

Question: What are the benefits of Western irrigation supported agriculture from the point of view of the national economy and United States foreign trade policy?

Answer: Western irrigation facilities constructed by the Bureau of Reclamation continue to perform a major role in the National economy and in the foreign trade policy of the United States. Since passage of the Reclamation Act of 1902, a total cumulative value of over $99 billion in crops has been raised from Reclamation projects costing about $7.8 billion to construct. Although the difference does not represent net return, it does signify, to some extent, the importance of these crops to local and national economies.

A total of $7.0 billion in crops was harvested from 9.2 million acres of land serviced by Reclamation projects in 1983. This represented about 10 percent of the total value of crops produced in the United States last year. Project lands are especiallly important for the production of vegetables, fruits, and nuts. During 1983, $1.8 billion in fruits and nuts and $1.9 billion in vegetables were produced from Reclamation projects. This represented nearly 27 percent and 52 percent, respectively, of the 1983 commercial production of these commodities in the United States.

Many of these crops are exported to other countries, providing revenue from external sources which helps to reduce the deficit in the balance of payments. Many commodities are used in various foreign aid and welfare assistance programs to feed improvished people throughout the world.

POWERPLANT UPRATING--INCREASE IN CAPACITY OF TOTAL POWERPLANT UPRATING UNITS

Question: We understand from your general statement on operation and maintenance that you are continuing the uprating of generating units for several of your powerplants to produce more peaking power from existing facilities. Would you please elaborate on the potential power increase.

Answer: During fiscal year 1986, we plan to continue uprating generating units at eight powerplants for an increased capacity in fiscal year 1986 of 48,500 kilowatts, as indicated in the attached schedule. The total increase in capacity for these eight powerplants when the uprating is complete will be a total of 180,500 kilowatts. The uprating activity is scheduled to coincide with the need to perform major maintenance on the units. By doing this, we can take advantage of the major maintenance investment to obtain greater capacity with minimal increased costs.

(The information follows:)

Plant	Existing Capacity (kW)	Capacity After Uprating (kW)	Total Increase in Capacity (kW)	Cost $1,000
Keswick 1/	--	--	--	$750
Hoover Powerplant - 2 Units 1/	--	--	--	6,900
Glen Canyon Units - 1 Unit	143,750	173,750	30,000	2,800
Blue Mesa 1/	--	--	--	1,000
Flaming Gorge 1/	--	--	--	670
Flatiron Powerplant - 1 Unit	31,500	42,000	10,500	410
Alcova 1/	--	--	--	216
Fremont Canyon - 1 Unit	24,000	32,000	8,000	2,335
	199,250	247,750	48,500	$15,081

1/ Increase in capacity will be realized in FY 87 and beyond.

YAKIMA FISH PASSSAGE AND PROTECTIVE FACILITIES, WASHINGTON

Question: Last year Congress provided that $4,800,000 was available for construction of fish passage facilities at Prosser Dam and Roza Dam. What is the status of this work?

Answer: Preparation of final designs and specifications are underway on the fish passage facilities at Prosser and Roza diversion dams. The construction of the fish screens must be accomplished primarily during the non-irrigation season since irrigation flows must be maintained for crop production. Due to the need to complete preparatory work including identification of biological criteria and the time required to prepare final designs, only approximately $1 million of the $4.8 million will be obligated in fiscal year 1985.

LOAN PROGRAM--APPROPRIATION CEILING

Question: What is the situation regarding the loan program appropriation ceiling?

Answer: Public Law 84-984 (as amended) authorized $600 million to be appropriated for loans and grants for water resource development of small reclamation projects by States or State-chartered agencies. Appropriations made under this act from the first in fiscal year 1959 through fiscal year 1985 amount to $432.8 million. To complete the projects in the current fiscal year budget and those proposed for the 1986 budget will require an additional appropriation of $119.8 million, bringing the total to $552.6 million. Two other approved projects, not in the budget, when completed will bring the total to over $580 million. Currently eight other loan applications, totalling $104.7 million, are under review in the Bureau.

REPORTS SUBMITTED TO CONGRESS IN FISCAL YEAR 1984

Question: Of the reports that you completed in fiscal year 1984, how many have you submitted to the Congress showing a possible project?

Answer: In fiscal year 1984, the Bureau of Reclamation completed and released to the Congress and the public 21 planning reports. Of the number, seven appraisal or planning/environmental reports considered the potential for further study. Seven special reports and one summary report provided information about specific water resource related problems. The remaining six reports were not supportive of continuing with the projects being studied.

A list of the 21 reports is provided.

REPORTS SUBMITTED TO THE CONGRESS IN FY 1984

Appraisal/Planning - EIS

1. Seward Project, Oklahoma
2. Gallup - Navajo Indian Water Supply Project, New Mexico
3. Offstream Storage, Yellowstone River, Montana
4. Lower Gunnison Basin Unit, CRWQIP,Colorado
5. Santa Margarita Project, California
6. Tularosa Basin Water and Energy Study, New Mexico
7. Idaho Anadromous Fish Habitat Restoration

Special or Summary

1. Central California - Nevada Wind Energy
2. Energy and Other Development Potentials - Lake Mead National Recreation Area
3. Nueces River Basin, Texas Basins Project
4. Central Valley Fish and Wildlife Management Study - Wildlife Habitat on Irrigated Farms, California
5. A-Canal Cross Drainage, Klamath Project, California - Oregon
6. Arrayo - Pasajero Flood and Silt Deposition Study, San Luis Unit, California
7. Solomon River Basin Water Management Study, Kansas
8. Upper Platte River Study, Colorado, Nebraska, Wyoming

Concluding

1. Garrison Diversion Unit, Municipal and Industrial Water Facilities, North Dakota
2. Meeker Dome Unit, CRWQIP, Colorado
3. Tiber Powerplant, Lower Marias Unit, P-SMBP, Montana
4. Guernsey Dam Powerplant Storage Unit, Colorado
5. LaVerkin Springs Unit, CRWQIP, Utah

BUREAU RESEARCH ACTIVITIES

Question: How is your research coordinated with other Government agencies?

Answer: Bureau engineers and scientists actively coordinate research with the Corps of Engineers, Tennessee Valley Authority, and Bonneville Power Administration, who have mission-oriented activities like the Bureau's. Formal coordination meetings have been held every other year with the Corps and Tennessee Valley Authority since 1960 and in recent years with Bonneville Power Administration. The next meeting is scheduled to be held in Knoxville, TN, in November 1985. Current and proposed research studies are reviewed to determine areas of mutual interest and interaction, to exchange information, and to prevent undesirable duplication of effort.

Additional complementary coordination meetings are held in specialty areas, such as dam safety, water quality, electric power, reaeration, and weed control. The meetings are usually in years between the biennial conference and involve additional agencies such as Environmental Protection Agency, Bureau of Mines, Fish and Wildlife Service, and the Agricultural Research Service.

In the weather modification research area, a close working relationship exists with the National Oceanic and Atmospheric Administration and the National Center for Atmospheric Research - National Science Foundation. Working coordination includes sharing of equipment, facilities, and computer programs and participation in joint experiments. The Bureau has a $700,000 cooperative atmospheric research program with the Federal Aviation Administration in radar detection of turbulence and icing which will also aid cloud seeding. The Bureau will also be the technical managers for a 5-year, $6 million Agency for International Development weather modification demonstration program in Morocco that is being conducted in conjuction with the Government of Morocco.

McGEE CREEK PROJECT, OKLAHOMA

Question: Does Reclamation recommend any changes in Public Law 97-88 to acquire interests by subordination in the conservation pool area of the reservoir, Natural Scenic Recreation Area, and the Wildlife Management Area?

Answer: Yes, we do. We recommend that Public Law 97-88 be modified to accommodate concern for protection of reservoir water quality and the scenic aspects of the Natural Scenic Recreation Area. Our recommendation is that all land required for Natural Scenic Recreation Area and the reservoir to the top of flood pool should also be acquired in fee title.

NORTH LOUP DIVISION, NEBRASKA

Question: This budget request shows that the estimated project cost of the North Loup Division exceeds the appropriation ceiling by $143.4 million. Please explain.

Answer: The original authorized amount of $79.5 million has been indexed to the current appropriation ceiling of $209.0 million. The current comparable project cost estimate is $352.4 million and exceeds the appropriation ceiling by $143.4 million. The increase in the estimated project cost is largely due to design changes in Calamus Dam and Davis Creek Dam such as seepage control and flood magnitude problems which were not considered in the feasibility studies, and from design standard changes experienced on Mirdan Canal and Laterals. These changes are being translated to the remaining canal and lateral systems. Current commitments will be held within the existing ceiling and legislation to increase the appropriation ceiling will be submitted to the Congress.

O'NEILL UNIT, NEBRASKA

Question: What is the status of the study to reduce the Federal costs of the authorized O'Neill Unit as requested by the Nebraska delegation?

Answer: The study was completed as scheduled on January 31, 1985, and submitted to Congress. In our report, the Bureau arrays six alternative plans, including the currently authorized project and identifies several areas where Federal costs may be reduced. Also, a number of modifications to the authorized facilities, as presently proposed, was reviewed. The modified plans developed during the preparation of this report would provide for essentially the same purposes as the authorized plan.

The report recommends that the official cost estimate be revised to reflect the measures included in Plan B of our Cost Reduction Report. This plan includes measures that result from reevaluation of design criteria and would be implemented in the final design. Implementation of Plan B has a total project cost estimate of $356,253,000, which is $27,647,000 less than the current fiscal year 1986 project cost estimate of $383,900,000.

The recommendations made in our cost reduction study have been reviewed by two Value Engineering groups. One of the groups is maintained at our Engineering and Research Center in Denver where they reviewed the current estimates for the dam. The other value engineering input was received through a contract with Harza Engineering. The results of these studies are appended to our report.

NEWLANDS PROJECT/WASHOE PROJECT DRAINAGE AND MINOR CONSTRUCTION, NEVADA-CALIFORNIA

Question: What is the status of the negotiated settlement of the water rights issues for the Newlands and Washoe Projects?

Answer: The negotiated settlement of the water rights issue for the Newlands and Washoe Projects continues to be the key to our Nevada issues. A legislative package has been assembled for submission to Congress. Negotiations reached an impasse in late 1984 due to continued resistance on the part of the State of Nevada and Truckee-Carson Irrigation District (TCID) to development of legislation with neutral terms.

A meeting was held in December with the Technical Work Group to discuss the Water Management Plan required in the draft legislation. The State of Nevada is chairing these discussions. There have been no further meetings todate.

The goal of providing additional water for the Pyramid Lake fishery restoration is the central issue in the negotiations. We intend to submit a legislative proposal in 1985 that would allow us to begin the necessary construction in fiscal year 1986.

HEART DIVISION, DICKINSON UNIT, NORTH DAKOTA

Question: We understand that Dickinson City officials claim that the bascule gate at Dickinson Dam is not suitable for North Dakota weather conditions and that there are serious reliability and workability questions associated with its operation. Has the Bureau tested the gate performance?

Answer: Yes. All aspects of the gate design and operation have been successfully tested and verified. There is some leakage of water past the gate seals. However, this is not considered serious and varies as to amount depending upon the reservoir water surface elevations and the daily temperature extremes. We are confident that this can be corrected without significant expense. The minor loss of water has not impacted the Bureau's contract obligations.

On February 21-22, 1982, the weather became very warm in the Dickinson area causing the reservoir to rise 6 feet in 24 hours. The gate was functioning in accordance with design requirements when a large ice block over 2 feet thick and weighing an estimated 500 tons was carried onto the partially open gate by the flowing water. A hydraulic line ruptured and the gate lowered to the 15 degree (80 percent open) position. No serious damage resulted and Bureau and city personnel were able to raise the gate within a few hours using jacks and system hydraulic pressure.

The incident brought to light several design considerations which had not previously been anticipated. A log boom, a water circulation system, and an emergency lowering and raising mechanism were all incorporated into the gate design. The system operating pressure was also increased to make the gate more reliable. A series of gate tests occurred following the events of February 1982 and following these modifications.

We continue to believe that the gate will be a workable and reliable facility and will provide the city with water for many years into the future.

Question: I understand the Bureau of Reclamation has advised officials of the city of Dickinson that the work associated with increasing conservation storage at Dickinson Dam is essentially complete. Do you intend to implement the repayment contract that provides for payment of reimbursable costs and operation and maintenance costs?

Answer: Yes. At a November 7, 1984, meeting in Dickinson among officials of the city and the Bureau, city officials were advised that the

Bureau would initiate repayment provisions of the bascule gate contract and also bill them for operation, maintenance, and replacement costs expected to incurred in 1985. City officials requested and were sent an accounting of the final costs associated with the gate on December 14, 1984. On January 3, 1985, the city was notified by the Bureau that the first payment of the gate costs totalling $3,148,529.43 would begin on January 1, 1986. They were also requested to pay within 30 days the estimated $20,000 operation, maintenance, and replacement cost for 1985.

On January 31, 1985, the city of Dickinson filed a lawsuit in the U.S. District Court for the District of North Dakota. The suit sought relief for the city by declaring the repayment contract void; by rescinding and cancelling the repayment contract; and by obtaining reasonable attorney's fees, costs, and disbursements as allowed by statute and equity for such other and further relief as the court may deem just and proper under the circumstances.

On February 4, 1985, a past due notice on the estimated $20,000 operation, maintenance, and replacement cost was sent to the city of Dickinson.

SAFETY OF DAMS PROGRAM

Question: What actions has the Bureau taken toward implementation of the 1984 amendments to the Safety of Dams Act of 1978?

Answer: Interior guidelines for implementing cost-sharing and other aspects of the Act have been prepared and implementation procedures will be issued after a 1-year trial period. Implementation of the Act is being executed using existing Bureau policies and procedures whenever possible to facilitate the timely completion of corrective actions on dams. Since enactment of the Safety of Dams Act amendments of 1984, dam safety activities of the Bureau have been oriented toward compliance with the requirements of that Act.

NEWTON PROJECT - SAFETY OF DAMS PROGRAM, UTAH

Question: Why is the Newton Project not included in the FY 1986 budget request?

Answer: Work priorities and budget constraints have caused the Newton Project, Newton Dam, to be inactive during FY 1986.

The modification report is currently before Congress for the 60-day review period, which will end at the end of March. Upon approval of the report, preparation of design specifications will begin and are scheduled to be completed in FY 1985. Award of the construction contract is scheduled for early FY 1987.

The work involved includes modification of the service and emergency spillway, and construction of a training dike to convey the expected flood waters.

ANIMAS-LA PLATA PROJECT, COLORADO AND NEW MEXICO

Question: What is the status of non-Federal up-front financing requirements and negotiations?

Answer: The up-front financing issue has not been actively pursued during the past year. Although the issue is unofficially raised from time to time, the status is unchanged from last year. The March 1983 drafts of the up-front funding contracts remain unaltered. These contracts demonstrate substantial willingness of New Mexico to fund the project in an amount equal to the non-Indian costs for municipal and industrial project water allocated to the State. The contracts contain two issues unresolved with Colorado:

(1) Reclamation believes that Colorado should offer to fund the full amount allocated to the State for non-Indian municipal and industrial project water. Colorado insists upon a $17,000,000 ceiling to its financing.

(2) Reclamation has requested State funding for the full amount allocated to the State for fish and wildlife enhancement and recreation. Colorado declined to participate in financing such costs.

Further negotiations or participation in other project proposes with Colorado and New Mexico will be pursued.

CENTRAL UTAH PROJECT - BONNEVILLE UNIT, UTAH

Question: What is the status of the repayment contract negotiations for municipal and industrial water on the Bonneville Unit, CUP?

Answer: We are completing negotiations for a supplemental repayment contract to cover an additional $340 million in costs. The Central Utah Water Conservancy District is seeking ways to reduce the total amount by which its repayment contract must be increased. It has approached the Bureau and the Utah congressional delegation requesting relief in the following areas: the Bonneville Unit power revenues provide assistance to repay M&I water costs; a decrease in the project interest rate; and a possible writeoff of increased construction costs in accordance with the District's perceptions about time delays and design changes.

Reclamation and Western Area Power Administration are working together to develop a package that will result in non-Federal financing construction of the power system and provide a source of revenue for power assistance to Bonneville Unit M&I.

Reclamation's analysis indicates that the water collection system necessary to develop the water supply needed in the immediate future and a delivery system can be essentially completed under existing repayment arrangements. Initiation of construction of facilities beyond that point, such as the Jordanelle Dam, and other features, is dependent on additional repayment arrangements.

CENTRAL ARIZONA PROJECT, ARIZONA-CALIFORNIA-NEW MEXICO-NEVADA-UTAH

Question: What is the status of the agreements between the Bureau of Indian Affairs and Reclamation on who will request appropriations for the operations, maintenance, and replacement costs associated with delivery of Central Arizona Project water under the terms of the Ak-Chin Indian Water Rights Settlement Act?

Answer: Discussions are continuing with the Bureau of Indian Affairs to determine the most effective way to obtain appropriations to pay the annual operation, maintenance, and replacement costs associated with the delivery of Central Arizona Project water. Reclamation anticipates that the Bureau of Indian Affairs will be responsible for obtaining the necessary funding as part of their trust responsibilities. This would be implemented through an interagency agreement. The anticipated annual funding level is from $5 to $7 million beginning in 1988.

OREGON WATER RESOURCE PROJECTS

Umatilla River Basin Study, Oregon

Question: Bring the Committee up to date on the Umatilla River Basin Study. Describe the scope and benefits that are being investigated in this basinwide study.

Answer: The study purpose is to produce a water development plan that will avert confrontation between the Confederated Tribes of the Umatilla Indian Reservation and non-Indians over basin water supplies. The tribes say their 1855 treaty with the United States reserved to them a viable salmon fishery and that this fishery has been destroyed by irrigation development. The Indians want to cooperate in a plan to restore salmon and steelhead runs but will pursue water rights to restore the fishery in the courts, if necessary.

The study has resulted in a plan to improve flows in the Umatilla River and provide adequate and safe fish passage facilities. These measures would restore salmon and steelhead runs to desirable levels and meet Indian fishery goals for the basin. Irrigators would receive a water supply at least equal to their present supply, and other irrigation system improvements to conserve water and reduce operating costs may be possible.

Importantly, the project can be phase developed with the first phase providing major fishery benefits and assuring irrigation supplies in the main stem Umatilla River. First phase development, which would include a Columbia River pumping station to supply irrigators so that Umatilla River diversions could be reduced to improve flow conditions for fish, would cost $37 million and require only 2 years to complete. This provides the opportunity to expeditiously implement the initial element and following construction to monitor its effects prior to proceeding with the second phase. The second phase development which includes a headwaters storage reservoir to improve flow conditions in tributary areas, would cost $76 million and could be developed subsequently.

The State of Oregon and Federal fishery agencies, the Northwest Power Planning Council, and the Umatilla tribes and other Indian groups strongly support the plan. Basin irrigation districts want to resolve the water supply dilemma and will support the plan with the assurance that their water supplies will not be jeopardized.

Question: Will the reconnaissance report be completed during this fiscal year as previously scheduled?

Answer: A draft of the Regional Director's Planning Report/ Environmental Statement has been completed and is under review in Reclamation. Following technical and policy review, we plan to release the document for public comment and hearings by June 1985.

Question: How will the $125,000 requested in the 1986 budget be utilized? Is any additional study authority needed before actual construction authorization?

Answer: The $125,000 requested in the fiscal year 1986 budget will be used to verify information essential to confirm project viability preparatory to the final filing of the report and environmental statement and the seeking of congressional authorization.

No additional study authority is necessary, however, authorization would be required to initiate construction.

Question: Will project viability be confirmed by the end of fiscal 1986? And is the budget request sufficient to get to that point?

Answer: We anticipate that the final planning report/environmental statement will be filed with the Environmental Protection Agency in fiscal year 1986. Fiscal year 1986 funds are to be used to verify the engineering, economic, environmental, and social aspects of the proposed project prior to filing the document.

Question: Based on an optimum construction schedule, when would project construction authorization be needed?

Answer: We anticipate that the various report review and processing steps will be completed late in fiscal year 1986 with submittal of the Secretary's final reporting documents to the Office of Management and Budget. This would be the supporting document to seek project construction authorization. Project construction authorization along with allocation of funds late in fiscal year 1986 or early in fiscal year 1987 would allow initiation of preconstruction activities leading to project implementation.

Question: Now, the budget justification data indicates that there is the "potential for up-front, non-Federal construction funding." Could you elaborate and provide more specific information on this?

Answer: A major cost of the project will be the power supply to operate the Columbia River pumping station. The power needed for the project is valued at $350,000 annually and Bonneville Power Administration would provide this power supply as part of its obligation to assist in restoration of Columbia River basin fisheries under section 4(h) of the Pacific Northwest Electric Power Planning and Conservation Act of 1980. The cost of this annual contribution will be assumed by regional ratepayers of the Columbia River power system.

In addition, Bonneville Power Administration, under power act authorities, is considering funding the fish screen and passage improvements included in the basin plan. If Bonneville Power Administration were to fund construction of all of these facilities, the contribution would total over $3 million.

Question: Will the recent decision by Secretary Clark to give special consideration to fishery restoration change the cost-sharing and financing provisions envisioned for this project?

Answer: Implementation of the project is being pursued as a treaty obligation. With this concept, no reimbursement of project costs associated with fishery restoration would be required. However, Bonneville Power Administration will help fund project implementation by providing power supplies and assisting in financing of fishway improvements.

Question: Resolution of competing demands for water in the Umatilla River is of extreme importance. Does the Bureau of Reclamation have adequate funds in its fiscal year 1986 budget to proceed with its work?

Answer: Fiscal year 1986 funds are to be used to verify the engineering, economic, environmental, and social aspects of the proposed project prior to filing the planning report/final environmental statement with the Environmental Protection Agency.

While the fiscal year 1986 funds requested for project investigations are sufficient to confirm project viability, funds are not available in fiscal year 1986 to permit data collection activities which are essential as a part of advance planning activities.

Savage Rapids Dam, Oregon

Question: We understand there is growing debate over the continued existence of Savage Rapids Dam which diverts irrigation water from the Rogue River and continues to be a impediment to anadromous fish passage. What plans does the Bureau have to remedy this problem?

Answer: Due to budget constraints, we were unable to propose in FY 1986 the initiation of a study to resolve this problem.

REGIONAL SIGNIFICANCE OF THE RECLAMATION PROGRAM

Chairman HATFIELD. At this time, I yield to the Senator from Tennessee for any questions he may have.

Senator SASSER. Thank you very much, Mr. Chairman.

I have just one or two questions, Commissioner Olson. As we all know here, and you know, the Bureau of Reclamation deals in 17 Western States. All of the funding for projects that you are requesting from this committee will be spent primarily in those 17 Western States. Is that correct?

Mr. OLSON. To the extent that the projects are constructed in those 17 Western States, yes, sir. To the extent that contractors from some place else may bid on them, we are not sure.

Senator SASSER. Commissioner, the point I am driving at, and I don't have to remind our distinguished chairman because he is well aware of this, but the point I am driving at is these moneys of almost a billion dollars will be spent in the West, on projects there, and none of these projects will be constructed east of the Mississippi River.

I like to remind some of my colleagues from the Far Western States who, as the chairman knows, sometimes give us some grief on this committee, and even some who are on the full committee give us some grief about projects and economizing and exercising fiscal austerity and not using taxpayers' money for regional programs, I want to take this opportunity to remind perhaps some of those colleagues something they have forgotten, that the Bureau of Reclamation deals just in 17 of the Western States and is of no help to those States east of the Mississippi River.

FISCAL YEAR 1986 BUDGET CUTS

Now I notice that your budget has been reduced by OMB about 28 percent this year. Is that correct?

Mr. OLSON. That is correct.

PROGRAMS EAST OF THE MISSISSIPPI RIVER

Senator SASSER. We in my region were not so fortunate. Our Tennessee Valley Authority budget, after being reduced by 40 percent by this administration, over the past 4 years, was cut an additional 71 percent by the administration this year.

So I will be coming to the committee, and I am sure my chairman is aware of this, and I am hopeful and optimistic that I get a sympathetic hearing from him at the appropriate time. But I want to take this opportunity——

Chairman HATFIELD. Would the Senator yield a moment? I want to assure him right now he is going to get a sympathetic hearing, like he always has on TVA, like he always has on ARC, like he has on the numerous Corps of Engineers projects that are east of the Mississippi. We have tried to give very careful consideration to each program and activity within the subcommittee—consideration that has always been fair and without regard to regional bias.

Of course, I would only say to the Senator from Tennessee that Senator DeConcini and I will certainly trade you our public land ownership of the Federal Government for what you own in the State of Tennessee acre for acre in terms of getting the Federal Government out of our land ownership.

Senator SASSER. I have always gotten a sympathetic hearing from the chairman. I have no bone to pick with the chairman whatsoever. But I just wanted to establish a record here that my area of the Southeast is not alone in experiencing some Federal largess. I am delighted to see that the Western United States participates in it also, because I happen to believe that is a function of a National Government, to try to deal with national problems. When you are talking about water for some of the Western States that desperately need that water, I think that is a national problem. I think the resources of this country ought to be called upon to deal with that problem.

That is my statement, Mr. Chairman. I wanted to get that in the record today. I knew I didn't have to convince you, but I may want to use that to convince others on another day.

Chairman HATFIELD. Happy to have you participate in the committee sessions, Senator Sasser. You are a very valued member.

Senator SASSER. Thank you.

Chairman HATFIELD. Senator DeConcini.

SUPPORT FOR TENNESSEE PROJECTS

Senator DECONCINI. Mr. Chairman, let me tell my friend from Tennessee that we in the West, who do benefit from the Bureau of Reclamation, appreciate his constant and steadfast willingness to be a national Senator as well as a tremendous representative of the people of his State. I pledge to him my continued support and interest in the Tennessee Valley Authority and other projects in his State because, as the Senator from Tennessee has said, Mr. Chairman, these are national investments. Though we benefit more profoundly, particularly at the outset of the construction, they do generate a tremendous productivity and benefits for the entire Nation. I want the Senator from Tennessee to know I appreciate that.

Chairman HATFIELD. If you would yield, I would like to make one further point for the record, that my State of Oregon gets less than 1 percent of the total Bureau's budget. [Laughter.]

Less than 1 percent.

Senator SASSER. Mr. Chairman, I think Oregon ought to get more. [Laughter.]

CENTRAL ARIZONA PROJECT, TUCSON AQUEDUCT

Senator DECONCINI. Mr. Chairman, I have some questions.

Chairman HATFIELD. Please proceed.

Senator DECONCINI. Mr. Olson, Mr. Broadbent explained there would be no delay in the Tucson aqueduct as a result of the reductions, and I express my thanks to him and to you. I am sure you had something to do with the Bureau's ability to adjust that.

How much additional money will the Bureau of Reclamation need to maintain the current schedule? Can that be done under these funds or will there be adjustments, or don't you know?

Mr. OLSON. Senator, we believe we need about $4.5 million to keep the contract on phase B of the Tucson aqueduct on schedule. The funding will come as a result of some carryover funds from good bids.

What we also have, Senator, is the option of using the $26 million on the regulatory storage part of CAP. We think it is probably more important to keep the backbone of the system on schedule so we can deliver water and start collecting revenue as soon as we can.

REGULATORY STORAGE DIVISION

Senator DECONCINI. You lead me to my next question about, I think it was $28 million, the Bureau requested for regulatory storage, or $25 million. Why was this included? Are you going to move ahead with that regulatory storage process?

Mr. OLSON. We are providing construction funds for the continued construction of the New Waddell Canal, which is the connecting canal.

Senator DECONCINI. Is that what this money is for?

Mr. OLSON. Yes, in addition we are doing preconstruction drilling, collection of design data, and moving forward on design activities on the New Waddell Dam, Cliff Dam, and the modification of Roosevelt Dam. Relocation of the Castle Hot Springs road will continue.

Senator DECONCINI. Under the worst scenario here for the Tucson aqueduct and the regulatory storage division, you are talking about maybe having to take $4.5 million from regulatory storage if you don't have it from carryover or from contracts coming in below bid?

Mr. OLSON. That is a correct assessment.

Senator DECONCINI. How much is that figure? Am I incorrect that it is $28 million?

Mr. OLSON. It is $26,264,000.

TUCSON AQUEDUCT, PHASE B

Senator DECONCINI. Mr. Olson, once the EIS is completed for the Tucson aqueduct, the Bureau is supposed to initiate construction on Tucson phase B. Could you give us the details for the record of where the Bureau is in phase B and when you think that construction funds might be forthcoming?

Mr. OLSON. Senator, contracts will be awarded for the completion of the Brady, Picacho, and Red Rock pumping plants. These are part of phase A.

Senator DECONCINI. That is all on phase B; is that correct?

Mr. OLSON. No. We will provide a schedule of phase B work for the record.

Senator DECONCINI. Would you, please?

Mr. OLSON. Yes, sir.

Senator DECONCINI. Thank you.

[The information follows:]

TUCSON AQUEDUCT

Once the environmental impact statement has been filed, the following events are required to allow initial construction work to begin. A record of decision must be prepared and approved by the Secretary of Interior. This is scheduled to occur in September 1985. A cultural resource mitigation contract must be awarded to mitigate the effects of construction on archaeological and historic resources. This is scheduled for award in September 1985, immediately after the record of decision is signed. Also, approximately 1,500 acres of land must be acquired on reach 4 during 1985 and 1986 to allow a construction award on this reach. Finally, designs and specifications must be completed on reach 4 and Twin Peaks/Sandario pumping plants.

These specifications are currently scheduled for completion in January and February 1986. This schedule would allow issuance of specifications and award of contract as follows:

Contract	Issue	Award	Complete
Reach 4	February 1986	June 1986	June 1988
Twin Peaks and Sandario pumping plants	March 1986	July 1986	January 1990

BUREAU FUNDING CAPABILITY

Senator DECONCINI. In previous years, we were told what the Bureau's capability was on a yearly basis. Maybe you don't want to give us these figures any more because they can be turned against you. But, I am interested in knowing the capability figures because of the extended and increased costs that are incurred by reducing the annualized expenditures.

Can you give us now or provide for the record what the Bureau's capability is in fiscal year 1986 on the entire Central Arizona Project? Those figures have been available in the past.

What I hope to convince somebody of in some administration is that if we funded these projects at full capability, we would really end up saving money in the long run. Is that information available now or would you like to submit it to us for the record?

Mr. OLSON. Senator, I think we would like to submit it for the record. I understand the question is the capability of the Bureau of Reclamation to spend money on a fiscal year basis and how that may affect the in-service date of the project.

[The information follows:]

CENTRAL ARIZONA PROJECT

CAPABILITY

The Bureau has a total capability of $194,204,000 for all features of the Central Arizona Project. This includes regular construction on the project as well as work on the non-Indian distribution systems. A breakdown of capability for the Central Arizona Project follows:

	Lower Colorado River Basin Development Fund	Non-Indian distribution systems	Totals
Fiscal year 1986 budget request	$134,700,000	$38,800,000	$173,500,000
Additional capability	12,453,000	8,251,000	20,704,000
Total	147,153,000	47,061,000	194,204,000

SAVINGS IF WORK PROCEEDS NOW

Senator DeConcini. Let me give you an example. I believe it was in 1985. Actually, it was in 1984. In 1984, we were told that the Bureau could spend upward of $250 million on the CAP. But for budgetary and deficit reasons and OMB pressure, of course the administration asked for much less. But as things go on, as we see in the case of Headgate Rock Dam, which was originally estimated to cost $21.8 million, the administration holds back on funding for too long and then project costs increase. The estimated cost to complete Headgate is now $56 million.

So I am sure there is ample evidence to show that we can save money in the long run if we bite the bullet and fund these projects based on full capability on a yearly basis.

UNDERFINANCING

Can you anticipate, Mr. Olson, how much underfinancing will be applied to the CAP in fiscal year 1985? How much was applied in 1984?

Mr. Olson. Underfinancing for the construction program in fiscal year 1986 is 13 percent, which is a significant number. It is 13.2 percent in fiscal year 1985, this current fiscal year. For the Central Arizona Project, the 1985 underfinancing is 14.9 percent.

Senator DeConcini. Does anybody know the figure for 1984?

Mr. Olson. I believe it was over 12 percent.

Senator DeConcini. Can you—and I have had it explained before—explain why you do this? Why is it necessary to do underfinancing, particularly on the Central Arizona Project or on any of these projects?

Mr. Olson. I will let the Assistant Secretary answer that.

Senator DeConcini. Explain the consequence of 13 percent, when we are cut 12 percent, then you take another 13 percent off of it. I am afraid, Mr. Broadbent, you are going to have to be a genie to pull out enough money to keep the Tucson aqueduct on schedule. I know you are well-intended and committed to doing that.

But if you could explain to me once again what the significance of underfunding is, maybe I won't have to ask you again next year.

EXPLANATION OF UNDERFINANCING

Mr. Broadbent. I think in the total picture you have to look at the total budget. If you have a $600 or $700 million budget, something is going to slip. For instance, this year we stopped construction on the Garrison project on September 30 and didn't start it again until February 1. That means we weren't able to spend much money in that year. It wasn't anticipated when we prepared the budget and so we had that money planned to be fully expended.

I think history has proven through the years that even though you program the money, and if everything goes well, and you are fully able and capable of spending it, something always happens. You might be sued on an EIS or there could be unfavorable weather or labor problems.

In the case of the non-Indian distribution systems, for instance, on CAP, we are far behind because we haven't been able to get the contracts signed with the agricultural interests. Their design people and their engineers who are doing the work haven't been able to meet the time schedule they gave us.

So we just have lots of those things happen over a period of a year.

I think our people would tell you we feel that 13-percent underfinancing is too high because with underfinancing at that level you end up not doing some of the things you have the capability to do. What you do is slip the award of a contract from July to September, or something like that, so you don't have the earnings in that year.

Historically, I think that underfinancing is a good thing. I think what we ought to look at is the level of underfinancing and the amount of money.

Senator DeConcini. Is it fair to say if all works well, you spend the maximum and the underfinancing is applied to the projects where it doesn't all work out?

Mr. Broadbent. That is correct. And that was true in one year on CAP when it looked like we were down to $147 million but we ended up spending $165 million because CAP had the capability and there were other projects that didn't.

SALT RIVER DAMS

SAFETY OF DAMS REPORT

Senator DeConcini. Mr. Broadbent, maybe you can help me on this question. Can you provide the current update on the status of the safety of dams report on the Salt River project dams and when can we expect to see the report approved. Who has the ultimate decisionmaking authority, the Secretary of Interior or OMB?

Mr. Broadbent. The safety of dams report is under our rules and has to go over to OMB for a policy look. It is still at OMB. They have asked us some questions. We responded to those questions. We have prepared an addendum based primarily on the study that was done by the National Academy of Sciences to look at safety of dams issues such as the inflow design flood criteria, the earthquake criteria, and the seismic criteria. We had that report filed with us about December.

We are meeting with the staff of OMB this week to explain the addendum. We would hope then we would be ready to discuss it with the appropriate policy people in the Office of Management and Budget sometime in the next week or so.

Senator DECONCINI. Do you have any estimated date that that might come forward?

Mr. BROADBENT. I am hopeful we will be able to move it in the next month or so.

OMB APPROVAL OF SAFETY OF DAMS REPORTS

Senator DECONCINI. Can OMB refuse to approve it? If they do refuse to approve it, are you prohibited from proceeding?

Mr. BROADBENT. We have never had to face that fact yet. I think under their executive orders, they have a great deal of control over the submission, sir.

SALT RIVER PROJECT, DAM SAFETY REPORT

Senator DECONCINI. Once the report is approved, how much do you anticipate could be used by the Bureau in the safety modifications of Salt River dams in 1986 or 1987?

Mr. BROADBENT. Could you repeat that question, please?

Senator DECONCINI. How much do you anticipate could be used for making safety modifications on the Salt River dams in 1986 and 1987?

Mr. BROADBENT. We have over $3 million of capability under Safety of Dams for 1986 under plan 6. That would begin some of the work we wanted to do.

Senator DECONCINI. Would you give us the figures, any idea of what you think you could use for fiscal year 1986, fiscal year 1987, and fiscal year 1988, assuming the report is approved as you have submitted it, or close to it?

Mr. BROADBENT. Sure, we can do that.

[The information follows:]

CAPABILITY FOR SAFETY OF DAMS MODIFICATION OF SALT RIVER DAMS

	Fiscal year—		
Dam	1986	1987[1]	1988[1]
Roosevelt	828,000	4,457,000	4,583,000
Stewart Mountain	2,200,000	2,291,000	4,241,000
Total	3,028,000	6,748,000	8,824,000

[1] Anticipating capability for fiscal years 1987 and beyond is speculative, given the uncertainty of timing of SEED report approval and initiation of construction.

STEWART MOUNTAIN DAM

Senator DECONCINI. I notice $600,000 has been requested for continuation of preconstruction activities on Stewart Mountain Dam. Could actual construction work be undertaken in 1986?

Mr. OLSON. In preconstruction activities, we are trying to stay ahead on that project. We have worked out an arrangement with the Salt River project that we are moving forward; our 1986 program is still preconstruction.

ADDITIONAL PREPARED QUESTIONS SUBMITTED FOR THE RECORD

Senator DECONCINI. Mr. Chairman, I have a number of other questions I can submit. I thank the chairman for his indulgence and I thank Mr. Olson.

Chairman HATFIELD. There will be questions submitted on behalf of Senator DeConcini and Senator Abdnor that will be submitted to you, Mr. Olson.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR DECONCINI

Central Arizona Project Financing

QUESTION: As you know, Mr. Secretary, Arizona water interests are in the process of formulating an up-front non-Federal financing proposal to help fund the actual completion of Plan 6 of the CAP. Even if the State comes up with a plan it feels is the maximum within its means, how do they know it will be a plan that contributes enough to the costs so that it will be seriously considered by Interior?

ANSWER: The Bureau of Reclamation and the Department have developed an array of options concerning non-Federal contributions towards completion of Plan 6. We currently are reviewing those options as Arizona interests are reviewing theirs. We are concerned that Arizona may proceed with its public review of financing options and arrive at a figure which, from our perspective, is too low. We believe that some dialogue, if not formal negotiations, should be initiated between Arizona interests and Department officials in the very near future—probably soon after completion of our current repricing analysis of Plan 6 facilities which should be completed in April, 1985.

QUESTION: Is there any magic figure that the state should be aiming for?

ANSWER: There is no specific figure. However, it is our intent to negotiate for non-Federal financing that will be substantial in relationship to the Federal investment contemplated for Plan 6.

QUESTION: If not, shouldn't there be some kind of signal to the State or the Congressional Delegation that they are on the right track or should they just wait until their negotiations have been completed at the State level and hope Interior will accept their plan as being in the "ballpark"?

ANSWER: As stated previously, I agree dialogue or negotiations should be initiated soon.

QUESTION: The State is willing to contribute to the construction costs for completing Plan 6. Don't you think they should know what the guidelines or criteria the Department plans to utilize in its "case-by-case" analysis are? If so, what are these guidelines?

ANSWER: Our principal objective is to secure the maximum non-Federal contribution that non-Federal interests will be willing to commit to Plan 6. I believe the State of Arizona is aware of that objective. The actual terms of the agreement are open to negotiation, and I feel it could be harmful to the negotiating process if the Department established, or were perceived as having established, rigid "guidelines" which deprived it of the ability to negotiate.

QUESTION: Does this Administration have any true water policy? If so, what is it? You indicate case-by-case review of projects will determine the non-Federal contributions necessary for Federal participation. Secretary Clark approved Plan 6 last April. Since that time, the onus has been placed back on the state to come up with a proposal. What leadership does the Department intend to exercise here?

ANSWER: This Administration's policy approach to critical water issues is best expressed in President Reagan's January 24, 1984, letter to Senator Paul Laxalt. We intend to exercise the flexibility inherent in that policy statement to negotiate for the up-front financing necessary to implement Plan 6. Time and money will be lost if the State interests and the Department fail to initiate discussions soon. As soon as we complete our review of our options, and complete the repricing analysis of Plan 6, we will contact State representatives and the Arizona Congressional delegation to discuss financing and implementation of Plan 6.

QUESTION: The State and all of our water interests in Arizona are holding meetings and attempting to negotiate on the local level in good faith. What assurance can they give those who will pay additional costs that the Administration will own up to seeing that the Federal contribution is forthcoming?

ANSWER: We desire to negotiate an agreement which, to the fullest extent practicable, provides the greatest assurance that sufficient Federal and non-Federal funding will be available to complete Plan 6 in a timely manner. We anticipate that the Congress will have to play a continuous, critical role in ensuring that sufficient Federal appropriations are available to hold up our end of the bargain with Arizona. Aside from a one-time appropriation of all Federal funds necessary to complete Plan 6, we anticipate that Federal funding for Plan 6 will remain subject to the annual appropriation process.

QUESTION: Just what projects have gotten approval by the Department since this case-by-case policy was implemented? If approved, what were the specific percentages of Federal vs. non-Federal contributions?

ANSWER: In March of 1985, we will execute an agreement with the State of Wyoming for the financing of modifications to Buffalo Bill Dam on the Shoshone Project. Of the original estimated modification cost of $106.7 million (October 1982 prices), Wyoming will contribute a maximum of $47 million (not indexible). The percentage non-Federal contribution for each aspect of the project is as follows:

Project Purpose	Up-Front, Non-Federal Funding
Power	46.0%
Municipal/Industrial Water	5.7%
Environmental Quality	46.0%
Highway Improvement	46.0%
Fish and Wildlife	0.0%
Recreation	0.0%
Archeological Salvage	0.0%

The Yakima Fish Passage and Protective Facilities, in the State of Washington, are designed to improve passage conditions for anadromous fish. This traditional beneficial activity has generally been deemed to be nonreimbursable. However, on this project, non-Federal up-front funding has been pledged by State and private interests, plus funding from the Bonneville Power Administration. Of the funding from the Bonneville Power Administration, 85 percent of such non-Federal funds are to be raised through power sales.

Project Purpose	Up-Front, Non-Federal Funding
Anadromous Fishery	33%

Provisions contained under section 4(b) of Public Law 98-541, pertaining to the Central Valley Project, Trinity River Division, Grass Valley Creek Sediment Control Project, provides for the following percentages of up-front funding. Contracts have not been finalized on these items.

Up-Front Funding Source	Percentage
State of California	15%
Public utilities, water districts, and other direct purchasers of water and power	50%

The Hoover Powerplant Uprating Program, as provided for in Public Law 98-381, states that the uprating program shall be undertaken with funds, advanced under contracts with the Secretary of the Interior, by non-Federal purchasers. We are currently in the process of initiating the process and developing the necessary information exchanges for carrying out the uprating program.

Project Purpose	Up-Front, Non-Federal Funding
Hydropower	100%

There are no other negotiated financing agreements at this point in time.

QUESTION: Who will make the ultimate decision regarding cost-sharing on Plan 6 or any other project for that matter? Is there some one person who has been assigned to be the negotiator for the Department?

ANSWER: A negotiating team will be designated when we contact the Arizona interests in regard to cost sharing. The ultimate approval of the financing arrangement for Plan 6 will be by me. Once agreement has been reached between the Department and the State, the proposal will be submitted to OMB for review and clearance to notify the Congress.

QUESTION: Does this Administration have any true water policy with regard to cost-sharing?

ANSWER: Yes. It is expressed in President Reagan's January 24, 1984, letter to Senator Paul Laxalt.

Central Arizona Project

Tucson, Phase B Construction

Question: Looking over last year's testimony, I note that the Bureau expected to request construction funds for Tucson B in FY 1986. Why did this not occur?

Answer: Budget constraints prevented us from doing so.

Question: It is my understanding that the Bureau expects to have the Final Environmental Impact Statement on the Tucson Aqueduct, Phase B approved by the Secretary sometime in August of this year. Is it fair to assume that this date will stand? If not, why not?

Answer: Yes. The environmental impact statement is currently on schedule for filing with the Environmental Protection Agency in August.

Question: If funds were made available, how much work could the Bureau do on actual construction of the Tucson B Leg in fiscal year 1986? How much would be needed just to start construction on Leg B?

Answer: Based on awarding Reach 4 in June 1986 and Twin Peaks/Sandario Pumping Plants in July 1986, approximately $1.8 million would be required in fiscal year 1986. An additional $1.5 million could be used for land purchases on Reach 5 and $1.3 million for the ED-2 Substation modification. Along with lesser items, Leg 3 has an additional capability of $4.2 million.

Question: Why was a request for Regulatory Storage estimates given priority over actual aqueduct work?

Answer: The amount requested for Regulatory Storage in fiscal year 1986 covers follow-on funding for ongoing work on the Castle Hot Springs Road Relocation, Waddell Canal, and preconstruction activities on New Waddell Dam. No funding is provided for new work on Regulatory Storage. All new contracts scheduled for award in fiscal year 1986 are on the Tucson Aqueduct and the Ak-Chin Indian distribution system.

Question: Could you list the steps necessary prior to actual construction work on New Waddell Dam. Would you provide your anticipated dates to complete these activities.

Answer: Reclamation has capability to award the Stage 1 contract as early as September 1986. This schedule requires completion of the geology investigation program for this stage and submittal of design data by July 1985. This work is currently on schedule. In addition, contracts will be awarded for relocation of the Park Access Roads and the Castle Hot Springs Road; County Center relocation; and Damsite Clearing. These contracts are required to reduce public access to the damsite area and to clear the site for additional preconstruction activities. The schedule for these contracts is as follows:

Contract	Award	Complete
Castle Hot Springs Road Relocation	Sept 1985	Nov. 1986
County Park Center Relocation	Oct. 1987	Nov. 1988
Damsite Clearing	Nov. 1986	Feb. 1987

Question: What would happen if some of the funds budgeted in 1986 for Regulatory Storage activities were to be reprogrammed for construction of the aqueduct?

Answer: The funds currently budgeted for the Regulatory Storage Division are for on-going preconstruction activities that are primarily Reclamation personnel costs and for contracts awarded in Fiscal Year 1985. Shifting funds from preconstruction activities on Regulatory Storage Division to activities on Tucson Phase B would cause slippages in the completion of the Regulatory Storage Division.

Question: For the record, could you provide a detailed accounting of funds necessary in future years to maintain water delivery to the Tucson area by 1991? (Information Is Provided)

FUNDS NECESSARY TO MAINTAIN WATER DELIVERY TO TUCSON BY 1991
(In thousands of dollars)

	FY1986	FY1987	FY1988	FY1989	FY1990	FY1991
Brady Pumping Plant						
Pumps & Motors (Awarded)	1,850	1,500	550	50		
Prime (Awarded)	5,250	100				
Completion	767	3,450	2,809	289		
Subtotal	7,867	5,050	3,359	339		

	FY1986	FY1987	FY1988	FY1989	FY1990	FY1991
Picacho Pumping Plant						
Pumps & Motors (Awarded)	1,560	1,000	315	50		
Prime (Awarded)	1,000					
Completion	811	3,648	2,970	306		
Subtotal	3,371	4,648	3,285	356		
Red Rock Pumping Plant						
Pumps & Motors (Awarded)	1,320	1,250	230	50		
Prime	10,136	4,209				
Completion	938	4,221	3,437	354		
Subtotal	12,394	9,680	3,667	404		
Twin Peaks/Sandario						
Pumpinge Plants Prime	505	6,215	13,248	7,018		
Brawley/San Xavier						
Pumping Plants Prime		4,844	23,569	19,838	2,719	
Snyder Hill/Black Mountain						
Pumping Plant Prime			7,848	17,926	92	
Canal Reach 1						
Prime Station 403 to 11	3,590	817				
Canal Reach 2 Prime	12,866	5,910				
Canal Reach 3						
Land & Rights	563					
Prime	11,532	6,652				
Subtotal - Reach 3	12,095	6,652				
Canal Reach 4 Prime	1,136	14,845	13,217			
Canal Reach 5						
Land & Rights	3,100	32				
Prime		4,378	5,254	1,314		
Subtotal	3,100	4,400	5,254	1,314		
Canal Reach 6						
Land & Rights		5,372				
Prime			3,682	6,311	3,156	
Subtotal		5,372	3,682	6,311	3,156	
Pipeline Prime		881	10,568	9,687		
Completion Work						
Control Cables Reach 1-3	173	1,040	1,041	83		
Control Cables Reach 4-6			134	1,604	802	
Subtotal		1,040	1,175	1,864	802	
Transmission Facilities	3,500	4,300	1,200			
Minor Contracts	100	7,514	8,756	3,650	3,012	633
Noncontract Costs	12,179	13,046	10,687	8,934	6,115	3,526
TOTAL	72,876	95,224	109,515	77,464	15,896	4,159

Water Delivery to Phoenix

Question: I note the Bureau still expects to meet the current schedule of water delivery to the Phoenix metropolitan area by late 1985. Could you provide a list of the sequence of events between now and the time water is delivered to the Phoenix metropolitan area on a permanent basis?

Answer: The only remaining work necessary to assure firm water availability to the Phoenix metropolitan area by December 1985 is successful completion of pump testing and the repair and cleanup contract on the Granite Reef Aqueduct. We do not anticipate any problem in maintaining this schedule.

Question: What is the Bureau's projected timetable for water delivery to irrigation districts in Arizona and the present status of each?

Answer: The Central Arizona Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system on November 21, 1983. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, and designs and specifications will be prepared. The District had scheduled two construction contracts for award in fiscal year 1986, however, sufficient Federal funds will not be available until fiscal year 1987 to allow these awards. Construction of distribution facilities is expected to be completed in fiscal year 1990.

The Chaparral City Water Company entered into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system, on December 6, 1984. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and one construction contract will be awarded. Construction is expected to be completed in fiscal year 1986.

The Harquahala Valley Irrigation District entered into a water service subcontract for delivery of Central Arizona Project water on November 18, 1983. The District's distribution system plan was approved and a repayment contract for construction of the system was executed on January 6, 1984. Rights-of-way acquisition was initiated in January 1984. The initial construction contract for 6.1 miles of main canal was awarded on April 27, 1984. The second contract for 4.5 miles of main canal, detention dike, and floodway was awarded on September 28, 1984. Three additional construction contracts are scheduled for award in fiscal year 1985. Construction of distribution facilities is expected to be completed in fiscal year 1986.

The HoHoKam Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project water on August 10, 1984. The District's distribution system plan was approved on November 8, 1984, and a repayment contract is scheduled for execution in March 1985. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and one construction contract will be awarded. The District had scheduled two additional construction contracts for award in fiscal year 1986, however, sufficient Federal funds will not be available until fiscal year 1987 to allow these awards. Construction is expected to be completed in fiscal year 1988.

The Maricopa-Stanfield Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system on November 21, 1983. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and three construction contracts will be awarded. The District had scheduled four construction contracts for award in fiscal year 1986, however, sufficient funds are not available to allow these awards until 1987. Construction is expected to be completed in fiscal year 1988.

The New Magma Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system, on November 21, 1983. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and five construction congracts will be awarded. Construction will be continued throughout fiscal year 1986 and is expected to be completed in fiscal year 1987.

The City of Prescott is scheduled to enter into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system, in December 1985. During fiscal year 1985, environmental impact analyses will be prepared, engineering and geologic investigations will continue, and designs and specifications will be prepared. Construction is expected to be completed in fiscal year 1988.

The Queen Creek, Chandler Heights Citrus, and San Tan Irrigation Districts are scheduled to enter into contracts for construction of a distribution system in April 1985. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and two construction contracts will be awarded. The Districts had scheduled the remaining two construction contracts for award in fiscal year 1986, however, sufficient Federal funds will not be available until fiscal year 1987 to allow these awards. Construction is expected to be completed in fiscal year 1987.

The San Carlos Irrigation and Drainage District is scheduled to enter into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system in August 1987 following completion of the Upper Gila River Division planning report and environmental impact statement. During fiscal years 1985 and 1986, plan formulation studies will be continued, environmental impact analyses will be prepared, and liaison will be maintained with the District. Construction is scheduled to begin in fiscal year 1987 and is expected to be completed in fiscal year 1992.

The Tonopah Irrigation District entered into a water service subcontract for delivery of Central Arizona Project water on June 29, 1984. The District is scheduled to enter into a repayment contract for construction of a distribution system in March 1985. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and two construction contracts will be awarded. Construction is expected to be completed in fiscal year 1986.

Water delivery schedules for each of the above non-Indian distribution system contractors are illustrated by the following table:

PROJECTED TIMETABLE FOR WATER DELIVERY
NON-INDIAN DISTRIBUTION SYSTEMS

WATER USER	INITIAL CAP WATER DELIVERY	FULL CAP WATER DELIVERY
Central Arizona IDD	Jun 1987	Dec 1989
Chaparral City WC	Apr 1986	2015
Harquahala Valley ID	Jul 1985	Mar 1986
HoHoKam IDD	Aug 1986	Feb 1988
Maricopa-Stanfield IDD	Jul 1987	Oct 1988
New Magma IDD	Mar 1986	Jan 1987
City of Prescott Yavapai-Prescott Community	May 1988	2034
Queen Creek ID Chandler Heights Citrus ID San Tan ID	Apr 1986	Jul 1987
San Carlos IDD	Jun 1988	Jan 1992
Tonopah ID	Jan 1986	Jan 1986

Central Arizona Project-Indian Distribution System

Question: Have funds been included in the FY 1986 budget request for Indian Distribution Systems for the Central Arizona Project? If so, could you please identify where in the budget these funds appear?

Answer: $23,412,000 has been budgeted in FY 1986 to fund the Indian Distribution Division. A description of the work is found on page 425 of the Budget Justifications.

Question: What progress is being made by the Bureau to fulfill its responsibility to construct these distribution systems for participating Indian Tribes in Arizona?

Answer: The contracts for the Santa Rosa Canal Divisions A&B will be awarded in FY 1985 and work will continue through FY 1986. Construction will be initiated on the Ak-Chin On-Reservation Distribution System during FY 1986 and may be possible in FY 1985 if surplus funds on other projects develop. Preconstruction activities on other Indian facilities will continue.

Question: Is it possible that CAP water will be available for Tribes but not deliverable because of the noncompletion of these distribution systems? If yes, please explain why this will occur.

Answer: There is some possibility that CAP water could be available but not deliverable to some tribes. Negotiations with the Salt River Pima-Maricopa Indian Community have been difficult but now seem to be progressing well. Lands to receive CAP water and the location of the distribution system were the primary issues. Design of the system has been delayed pending resolution of these issues. Construction could be initiated approximately two years after these issues are resolved. Water will be available in the Granite Reef Aqueduct by December 1985.

The Fort McDowell Indian Community is in the process of completing a development plan for the reservation. Delivery of such water must be accomplished by exchanges with upstream users on the Verde River. Preconstruction activities have been delayed pending completion of the development plan of water exchange agreements. Construction can be initiated within two years after completion of those items.

The Gila River Indian Community has not signed a water service contract nor identified the lands to receive the water. Negotiations are progressing; however, design of this system cannot begin until negotiations are complete. We are unable to predict when negotiations will be completed at this time. Water will be available in the Salt Gila Aqueduct in 1986.

The Ak-Chin Indian Community will receive water from the Tucson Aqueduct through the Santa Rosa canal. Under the terms of the Ak-Chin Water Rights Settlement Act, water must be delivered to the reservation by 1988 or damages must be paid. We expect to have all delivery systems completed prior to that date. The Community is making good progress on its on-farm distribution system being constructed under an ongoing Small Reclamation Projects Act loan. Work under a supplemental loan may be started in FY 1985.

The Chui Chu Papago Indian Community will also receive water from the Santa Rosa Canal. At the request of the District, preconstruction activities have been delayed pending action on its proposed water rights settlement bill. Lands with a potential for receiving water have been identified. Water will be available in the Santa Rosa Canal by 1988. We are unable to predict how long construction activity will be delayed by the pending water rights settlement bill.

The San Xavier Reservation and Shuk Toak District of the Sells Papago Reservation will receive water from the Tucson Aqueduct. Under the terms of the Southern Arizona Water Rights Settlement Act, water must be delivered to each by October 1992 or damages must be paid. Water is scheduled to be available in the Tucson Aqueduct by that date. Good progress is being made on the San Xavier system and preliminary negotiations are underway with the Shuk Toak District. We expect to meet the required water delivery dates.

Most of the remaining Indian Tribes and Communities are far removed from the aqueduct system and will probably receive water through exchanges. In some cases, negotiations for such exchanges have been initiated. Some groups have preliminary work underway for development and use of their water; however, none have progressed sufficiently to permit initiation of pre-construction activities on the individual systems. Schedules for actual water delivery have not been established for any of these groups.

Question: Could you provide a schedule listing the dates you anticipate the Indian Distribution Systems will be completed, by Tribe?

Answer: Water is scheduled for delivery to the Salt River Pima-Maricopa Indian Community, the Ak-Chin Indian Community, and the Chui Chu Papago Indian Community by 1988. The delivery dates for the remaining Indian communities will be determined as planning is completed. With optimum funding, the Indian Distribution Systems could be finished by 1995.

Question: Could you further provide a schedule listing when water will be delivered to each Indian community?

Answer: Water will be delivered to the Ak-Chin Indian Community in early 1988 and the San Xavier Reservation and Shuk Toak District by October 1992. Schedules for delivery to the remaining groups are tentative and depend largely on factors over which Reclamation has no control; e.g., action on pending water rights settlement legislation, completion of development plans, identification of lands to be served and use for the water, etc. Construction of the Salt River Pima-Maricopa, Chui Chu Papago, and Gila River systems could commence as early as 1987 and water delivered in 1988, if these problems can be resolved. We encourage the tribal groups in these efforts and offer assistance at every opportunity, however, progress is slow in most cases.

Question: Will the Bureau be able to meet its scheduled water delivery dates to Arizona Tribes where water settlements have been negotiated? Please explain.

Answer: We foresee no problem with water delivery to the Ak-Chin Indian Community in 1988. Construction of all systems required for such delivery will be underway by early 1986 and are scheduled for completion by January 1988.

Delivery to the San Xavier and Shuk Toak District by October 1992 depends primarily on completion of the Tucson Aqueduct. We have the capability to complete the Aqueduct on time provided adequate funding is provided in the outyears.

Question: Does the Bureau have the capability in fiscal years 1986 through 1988 to undertake work on these distribution systems? If so, how much by year?

Answer: The Bureau does not have additional capability in FY 1986 for the Indian Distribution Systems and future capability will be dependent upon the progress we make in FY 1986 on water rights and water service contract negotiations, reservation development plans and other non-budgetary factors.

Plan 6 Activities

Question: Could you specifically identify what preconstruction activities will take place on Plan 6 in fiscal year 1986 by amount?

Answer:

New Waddell Dam:	
Prepare Designs and Specifications for:	
Waddell Dam Stage 1	2,000,000
Pump-Generating Plant Structure	800,000
Pumps, Motors, Generators	300,000
Damsite Clearing	20,000
Design Data Collection activities for:	
Waddell Dam Stage 2	1,000,000
Pump-Generating Plant Completion	200,000
Stream gaging	95,000
Roosevelt Dam:	
Design Data Collection activities for:	
Roosevelt Dam Modifications	3,930,000
Apache Trail Highway 88 Relocation	30,000
Designs and Specifications for:	
Apache Trail Highway 88 Relocation	50,000

Cliff Dam: No significant activities.

Papago Water Settlement

Question: Under the terms of the Southern Arizona Water Settlement legislation, the Secretary is required to pay damages equal to the replacement costs of water for the Papago Tribe if water is not delivered to the community by October 12, 1992.

(a) If the completion of the Tucson portion of the CAP is delayed until 1993, does the Secretary feel he is obligated to pay the replacement costs or to pay costs equal to the value of the undelivered water?

(b) Will such funds be available in the Cooperative Fund, provided for in Sec. 313, for these damages? Please explain.

(c) Is it your opinion that the Tribe would be successful in its claims for damages in accordance with Subsection 15.2(C) in the U.S. Claims Court under Section 1505 of Title 28, U.S.C.?

Answer: As stated in Secretary Hodel's testimony during this hearing, Reclamation intends to complete the Tucson Aqueduct so that water will be available in 1991 and that damages will not have to be paid.

Question: What is the status of studies provided for under Subsections 303(b(1) and 303(b)(2) of that Act?

Answer: The Papago Tribe has indicated a strong desire to perform the Water Resources Study authorized under Subsection 303(b)(1) by a Public Law (P.L.) 93-638 contract. The Tribe is currently meeting with the U.S. Geological Survey (USGS). Once these discussions are completed, the Tribe will prepare a scope of work to perform this work under P.L. 93-638 with either Reclamation or USGS.

As part of Reclamation's current P.L. 93-638 contract with the Tribe, the Tribe is required to conduct the Alternative Energy Report authorized by Subsection 303(b)(2) of the Act. This report is scheduled for completion in November 1985.

Dam Safety

Question: Could you provide a current update on the status of the Safety of Dams SEED report for Salt River Project Dams? When can we expect to see that report approved? Who has the ultimate decision-making authority; the Secretary or OMB?

Answer: The Salt River Project Safety of Dams Report was sent to the Office of Management and Budget (OMB) on April 23, 1984. It conducted a thorough review of the report and responded to Reclamation on January 14, 1985. OMB identified three concerns with the report, and they were:

1. The validity of the allocation to dam safety for the proposed Salt River Dams work instead of flood control;
2. Resolution of the endangered species problem at Cliff Dam; and
3. Inclusion of the cost sharing requirement of the Reclamation Safety of Dams Act Amendments of 1984 to the report.

Reclamation has been responding to those issues. We completed an amendment to the report reevaluating the hydrology on the Salt River in light of OMB's comment and in accordance with the recently published report "Safety of Dams - Flood and Earthquake Criteria," by the National Research Council.

In regard to the endangered species problem, we are working with the Fish and Wildlife Service (FWS) to identify reasonable and prudent alternatives.

With respect to the cost sharing for the proposed work we expect to execute agreements with the Salt River Project for the necessary repayment.

The report to be submitted to Congress will be the Secretary of the Interior's report and will include OMB's comments.

Although we cannot give you an expected transmittal date, we expect it to be soon.

Question: Once the report is approved, how much do you anticipate could be used by the Bureau to undertake safety modifications on Salt River Dams in FY 86 and FY 87?

Answer: In FY 1986 we have requested $600,000 for preconstruction activities on Stewart Mountain Dam. Outyear funding in FY 1987 and 1988 shows estimates of $1.0 million and $3.6 million, respectively, to be requested. Those funds will be used to complete preconstruction activities and initiate construction.

Upon approval of the modification report, we will incorporate other Salt River Project dams into our construction program.

Question: Could you tell me whether or not funds have been included in the budget request for safety work on Roosevelt Dam? If included, where is the request located in your budget justification?

Answer: $129,000 in fiscal year 1986 could be used to accelerate land acquisition and geology adits on Roosevelt Dam. However, it has not been requested in the budget submission due to the budgetary constraints on the Bureau's construction program.

Question: I note $600,000 has been requested for continuation of preconstruction activities on Stewart Mountain Dam. Could actual construction work be undertaken in FY 1986? If not, why not? If yes, how much capability does the Bureau have in FY 1986? When does the Bureau estimate this work will be completed?

Answer: Actual construction work cannot be undertaken at the Salt River Project's Stewart Mountain Dam during 1986 because the design for the modification work will not be completed until fiscal year 1987. We anticipate that the repair of the spillways and foundation of Stewart Mountain Dam will be underway in fiscal year 1987 and essentially complete by fiscal year 1990.

Question: Why were funds not included in the budget request under "Potential New Starts" for Salt River Project Dams?

Answer: OMB has identified several concerns with the original safety of dams report for the Salt River Project. Reclamation has been responding to those issues and we are optimistic that the report will soon be approved. Funding will be requested upon completion of OMB's review and approval of the report.

Headgate Rock Hydroelectric Project

Question: I congratulate the Department for again requesting funds to include construction activities on Headgate Rock Dam. Please provide for the record the Department's sequence of events necessary to complete this hydroelectric project.

Answer: The fiscal year 1986 budget request provides for the following sequence of events for completion of the Headgate Rock Hydroelectric Project in early fiscal year 1990:

Award of the contract for turbines and generators in April 1986 with completion in mid 1989.

Award of the contract for the powerplant and transmission lines in October 1987 with completion in early fiscal year 1990.

New Surveys and Studies

Question: I note the President has included $2.5 million in his budget request for new starts. Does the Bureau have any indication as to what these funds will be specifically used for? Could you please explain.

Answer: There are ten proposed plan formulation and two advance planning new starts. Summarized below is a list of the proposed studies along with the fiscal year 1986 funding request.

	Project	FY 1986
Plan Formulation		
1.	Cross Delta Constriction Investigation, California	$ 250,000
2.	Delta Support Studies, California	322,000
3.	Groundwater Recharge Demonstration Program	325,000
4.	High Mountain Aquifer Study, Colorado	100,000
5.	Kansas River Basin Water Study, Kansas	115,000
6.	Offstream Storage, California	150,000
7.	Refuge Water Supplies, California	80,000
8.	San Juan River Unit (CRWQIP) Colorado, Utah, New Mexico	223,000
9.	Spring Canyon Pumped Storage Project, Arizona	240,000
10.	Umpqua River Basin Water Resources Management Investigation, Oregon	170,000
Advance Planning		
1.	Minidoka Project, North Side Pumping, Idaho	225,000
2.	All American Canal Relocation, California	300,000
		$2,500,000

High Plains Groundwater Recharge

Question: How much money would the Bureau need to initiate activities relative to the High Plains Groundwater Recharge program? Have funds been budgeted? Could you provide me with the status of activities authorized by this new legislation?

Answer: The Bureau of Reclamation needs $325,000 in fiscal year 1986 to initiate studies under the High Plains Groundwater Recharge program. These funds are included in our 1986 budget request. Activities to date include a letter of introduction to the Governors of the 17 Western States which briefly described the study and included a draft site selection process for their review and comment. All States have given us their comments and have named their principal contact for the study. We are working with the Enviromental Protection Agency on a memorandum-of-understanding to provide for an evaluation of the impacts to surface water and groundwater quality resulting from the groundwater demonstration projects. Activities relative to site selection, planning, and design of recharge projects cannot be initiated until funding has been provided.

Tucson Groundwater Recharge Demonstration

Question: As you know, there is considerable interest in the Tucson community for a Federal groundwater recharge demonstration project. Tucson leaders have discussed a modest groundwater project with Bureau of Reclamation officials and have offered to share in fifty percent of the costs for such a project. What do you estimate the total cost of this project to be?

Answer: The total cost of the Pima County/Santa Cruz Groundwater project is estimated to be $1,800,000.

Question: It is my understanding that funds were requested by Bureau of Reclamation for this project in FY 86. Is this true?

Answer: This project was considered by the Bureau of Reclamation during early budget development for fiscal year 1986 but was later dropped.

Question: If so, why was a decision made to deny the funding? Was this decision made by Bureau of Reclamation or OMB?

Answer: The Bureau of Reclamation did not propose funding for this and many other potential new projects due to limited funds available for new starts in its general investigations program for fiscal year 1986.

Question: If funds were made available, could this project be completed in FY 86? What has been the nature of the Bureau's discussions to date with the Tucson community on this project?

Answer: No, this would be a 3-year investigation and if initiated in fiscal year 1986 would extend through fiscal year 1988. The Bureau's Arizona Projects Office has had meetings with the city of Tucson and has discussed this potential project with them.

Spring Canyon Pumped Storage Project

Question: Has the Bureau budgeted funds necessary to complete a feasibility study on the proposed Spring Canyon Pump Storage Project? If not, what are the estimated costs of this study? Could the Project be initiated in FY86 if the funds were made available? Could you provide for the record a listing of interests who have indicated a desire to cost-share the study and actual construction of this project? What is the Bureau's position on this project?

Answer: The Spring Canyon Pumped Storage Project located in the Lake Mead National Recreation area is a proposed new start for fiscal year 1986. The total estimated cost of this 3-year study is $1.5 million with $240,000 Federal funds budgeted for fiscal year 1986. Reclamation has made initial contact with major utilities in Nevada, Arizona, and California. Response to cost sharing for planning studies has been positive. These non-Federal entities include the Arizona Electric Power Cooperative, Arizona Public Service Company, City of Riverside-California, Colorado River Commission of Nevada, Imperial Irrigation Distict, Nevada Power Company, Public Service Company of New Mexico, Salt River Project-Arizona, San Diego Gas and Electric Company, Tucson Electric Power Company, and the Wellton Mohawk Irrigation and Drainage District. Letters of Intent have been submitted by several of the above to cumulatively share at least 50 percent of the study costs. Based on the local interest in this project the Bureau supports initiating this study in FY 1986.

Yuma Desalinization Project

Question: The Bureau has included $22 million in its budget request for continued work of the Yuma Desalinization Plant. Will this amount be sufficient to maintain the schedule for expected completion of the project by 1989?

Answer: As indicated by the Budget Justifications, the completion date has been delayed to 1990 because of budgetary constraints. However, the savings resulting from the low bid on the desalting plant completion contract will reduce the impact somewhat.

Yuma Quartermaster Depot

Question: Could you explain the status of the contract to complete the relocation activities for the Yuma County Water Users' Association and construct a new facility?

Answer: The proposed Drainage and Minor Construction Act contract provides for the United States to advance $1.5 million to the Association for relocation activities and to construct new headquarters facilities. In accordance with Executive Order 12322 of September 17, 1981, OMB concurred with our congressional draft letters on February 22, 1985.

Question: When do you anticipate the contract will be sent to the Congress for review and approval?

Answer: We expect the proposed contract to be submitted to Congress in March 1985 for a 60-legislative day review period.

Yuma Area Wells

Question: How many Bureau of Reclamation wells are continuing to operate in the Yuma area to alleviate groundwater problems? Do you anticipate it will be necessary to drill more wells to cope with unanticipated groundwater problems? If so, how many and at what cost?

Answer: We have constructed eight wells in the Yuma area, seven of which are currently operational. Four of those wells have been in operation since August 1984, three have become operational in early 1985, and the last well is completed but we do not yet have a power contract to operate the well. The four wells constructed by local entities in conjunction with the Federal Emergency Management Agency have been in operation since September 1984. The wells have been effective in relieving the high groundwater in the localized area of each well. Flow on the Colorado River through Yuma has been high the past two months as above normal runoff forecasts have required flood control releases of 28,000 cubic feet per second from Hoover Dam. We expect that those flows will gradually be reduced in March, which will result in lower flows through the Yuma area. Reclamation and the Yuma Flood Control Task Force are continuing to evaluate the overall effect of the completed wells and the possible need for additional wells. The benefits of additional wells are uncertain at this time given the expected reductions in river flow in March.

Colorado River Flooding

Question: Do you anticipate any serious flooding problems along the Colorado River this Spring due to unusually high runoff in the Upper Basin? What plan does the Bureau have for dealing with this potential problem in 1985 and in future years?

Answer: We anticipate no serious flooding along the lower Colorado River in 1985. The current forecast for Spring runoff in the basin is about 150 percent of normal. The runoff in 1983 was 194 percent of normal, and 1984 was 205 percent of normal. Flood control releases from Hoover Dam have been 28,000 cubic feet per second during January and February. We expect to begin gradual reductions in those releases in March; thus the 28,000 cubic feet per second flow during the past two months is likely to be the maximum flow along the lower Colorado River in 1985. Peak flows were 44,000 cubic feet per second in 1983, and 35,000 cubic feet per second in 1984. There has been no serious flooding along the river this year. Current available flood control space in the reservoir system is about 8.6 million acre-feet. Given the current runoff forecasts and available storage space, the potential for flooding in 1985 is low.

We are completing a study on Colorado River operations using our CRSS (Colorado River Simulation System) computer model to evaluate various alternative operating schemes for the reservoir system in terms of the probability of damaging flood control releases, surplus water for Lower Basin States and Mexico, reduced powerplant bypasses, and Upper Basin depletions. The completed study will serve as a tool in further evaluations of possible operating schemes by Reclamation and representatives of the Colorado River Basin States. We are also continuing to work with the National Weather Service and the Geological Survey to improve the data collection network in the basin so that future runoff forecasts can be more accurate.

Coolidge Dam

Question: It is my understanding that funds have been requested by the Bureau of Indian Affairs to continue emergency safety of dams work on the Coolidge Dam on the San Carlos Apache Indian Reservation. Why were funds not requested under the Bureau of Reclamation budget? With Congressional authorization of Coolidge under the Reclamation Safety of Dams program, does the Bureau intend to exercise authority over Coolidge or will the Dam continue to be managed by the Bureau of Indian Affairs?

Answer: Coolidge Dam is a Bureau of Indian Affairs dam. The Bureau of Reclamation is providing engineering assistance in the preparation of designs and specifications, award of contract and on-site construction inspection of the repairs to the outlet works, replacement of the penstocks, and relocation of the switchyard. Since the dam is still an Indians Affairs facility, funds are requested in its budget. Currently, amounts necessary for the work which Reclamation performs is transferred to Reclamation by agreement with Indian Affairs. No change in responsibility for Coolidge Dam is expected at this time.

Question: As you know from continuing Reclamation investigations of this structure, extensive work also needs to be undertaken on the generators to provide electrical power output. What is being done by either Reclamation or the BIA to assure that the necessary generator repair work is undertaken?

Answer: The Bureau of Indian Affairs requested $4,050,000 for FY 1986 to complete the necessary emergency repairs that were started in 1985. No funds were requested for the generators in FY 1986. Assessment of that need and request for funding will have to be considered in the future as other priorities are also considered.

Question: Is there sufficient authorization under the Safety of Dams law to undertake the work at Coolidge, both for safety of dam purposes and generator replacement?

Answer: There is sufficient authority under the Safety of Dams Act to undertake work for safety modifications at Coolidge Dam. However, the estimates which were developed to justify the increased safety of dams appropriation ceiling did not include the cost for modification of Coolidge Dam. When Coolidge was added to the Safety of Dams Act Amendment, no additional appropriation ceiling was provided. With respect to the generators, that work does not fall under the scope of dam safety and would not be performed under the authority of Safety of Dams Act.

QUESTIONS SUBMITTED BY SENATOR ABDNOR

Question: What will be the effect on irrigators if the power marketing administrations are allowed to raise their rates?

Answer: There would be no effect on irrigators who are participating in a Bureau of Reclamation irrigation project and who have pumping power provided by federally developed hydropower. An increase in rates charged by the power marketing administrations would affect the commercial sales of power, not the power dedicated to project purposes, such as irrigation.

Future Water Development

Question: In light of the budget deficits, what are your goals and what do you feel it is reasonable to anticipate in terms of water development over the next few years?

Answer: As Secretary of the Interior I am committed to the Department's broad policy objective of increasing the supply of quality water resources. Within that context I am committed to working with the Congress, the States, local entities and the private sector to move forward in developing much needed, environmentally sound, and economically prudent water resources. By carefully following President Reagan's policy on financing water projects we expect to be able to reduce federal spending while still meeting water development needs.

Belle Fourche Unit

Question: Will the Belle Fourche irrigation rehabilitation project be ready for construction this year?

Answer: Yes. The Belle Fourche Unit has $710,000 budgeted for preconstruction activities in fiscal year 1985 which will be utilized to ready some of the project features for construction. However, construction of project features cannot begin before fiscal year 1986.

Question: Could the project effectively use additional construction funds in fiscal year 1986?

Answer: Yes; however, the President's fiscal year 1986 budget now before Congress contains no fund request for the Belle Fourche Unit. The project has the capability of expending $2,400,000 in fiscal year 1986 for the rehabilitation of laterals, purchase of pipe and equipment for the irrigation district, building construction, land acquisition, and design and specifications work.

WEB Rural Water Project

Question: Based on current budget projections, what is the estimated completion date of the WEB project?

Answer: The estimated completion date of the WEB project is 1990 based on current fiscal year 1985 fund availability and the fiscal year 1986 budget request.

Question: What features of the WEB project are scheduled for construction in fiscal year 1985 and fiscal year 1986?

Answer: The following features are scheduled in fiscal year 1985: intake facilities, water treatment plant, main transmission pipeline No. 1, main storage reservoir, and three sections of the secondary transmission pipeline. Features scheduled for construction during fiscal year 1986 are the main transmission pipeline No. 3 and No. 4, and four sections of the secondary transmission pipeline.

Lake Andes-Wagner

Question: Could the Lake Andes-Wagner irrigation project utilize advance planning funds in FY 86?

Answer: No. All advance planning activities are scheduled to be completed in fiscal year 1985. The planning report/draft environmental statement was filed February 28, 1985. The final environmental statement is scheduled to be filed in September 1985.

CENDAK

Question: What components of the CENDAK project are to be studied in FY86?

Answer: Advance planning activities will continue in fiscal year 1986. The major projectwide efforts will be detailed land classification and drainage investigations, surveying of main project facilities, water quality data collection and analyses, class III archeology study, and environmental habitat evaluation.

South Dakota Water Delivery Study

Question: How will the possible future extension of the Garrison project into South Dakota be affected by the recent Garrison Commission Report?

Answer: The objective of the South Dakota Water Delivery Study is to investigate the potential of supplying additional water to South Dakota using Garrison Diversion Unit facilities. Since the Garrison Commission recommendations differ from the presently authorized Garrison project, the base conditions and the opportunity to use Garrison facilities may change for the South Dakota Water Delivery Study. Plan formulation cannot be completed until the base condition is defined. As a result, the Plan Formulation Working Document will be delayed from March 1985 to March 1986 and the Planning Report/DES will be delayed to late FY 1986.

Question: What aspects of the Garrison extension will be studied in FY86?

Answer: The major effort in FY 1986 will be to continue working on the plan formulation process whereby all alternatives are evaluated and a preferred plan selected. The engineering survey of the James River to determine channel capacity and a detailed water quantity and quality analysis will be completed. More detailed studies (hydrology, engineering, economics, social, environmental, land classification, geology) of the preferred plan will culminate in a Regional Director's Proposed Planning Report/Advance Draft Environmental Statement which is scheduled for late 1986.

SUBCOMMITTEE RECESS

Chairman **HATFIELD**. Thank you, Mr. Broadbent and Commissioner Olson, and I thank each one of you for your appearance here today.

We will recess until Tuesday at 2.

Mr. **OLSON**. Thank you very much, Mr. Chairman.

[Whereupon, at 3:13 p.m. Tuesday, February 26, the subcommittee was recessed to reconvene at 2 p.m. Tuesday, March 5.]

DELAWARE, SUSQUEHANNA, AND POTOMAC RIVER BASIN COMMISSIONS

PREPARED TESTIMONY AND PROGRAM JUSTIFICATIONS

Chairman HATFIELD. Before we end the hearings and without objection, I want to incorporate in the record the prepared testimony and justification material of the Delaware River Basin Commission, the Susquehanna River Basin Commission, and the Interstate Commission on the Potomac River Basin.

[The information follows:]

DELAWARE RIVER BASIN COMMISSION

STATEMENT OF GEORGE J. KANUCK, U.S. COMMISSIONER

Mr. Chairman and Members of the Committee:

It is a pleasure for me to appear before you again today. I appear before you today in support of the Fiscal Year 1986 appropriation requests for salaries and expenses for the Office of the United States Commissioner and also for the Federal Contribution to the Delaware River Basin Commission.

The Delaware River Basin Commission was created by compact among the States of Delaware, New Jersey, New York, the Commonwealth of Pennsylvania, and the Federal Government (Public Law 87-328). Utilizing the authorities of the compact, the signatory parties participate jointly in managing the conservation, utilization, and development of the water and related land resources of the region.

The Commission's membership consists of the Governors of the signatory states and a Federal Member appointed by the President to represent all Federal agencies. The Federal Member historically has been the Secretary of the Interior. In addition, the President and each Governor appoint an alternate with identical powers of the Member, including the authority to vote in the absence of the Member. The staff of the Commission is comprised of non-Federal employees and receives its direction from the Members and Alternates through the Executive Director.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government in the deliberations of the Commission and to protect the national interests in the water resources development programs for the Delaware River Basin. To accomplish this, the Member and the Commissioner work closely with all concerned Federal departments and agencies, keeping them fully informed, coordinating their views, and representing their interests in all Commission decisions relating to the Delaware River Basin Comprehensive Plan (the Commission's primary regulatory tool) and the advisability of individual water resources policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

An appropriation of $168,000 is requested for Fiscal Year 1986 to provide for the operating expenses of the Office of the United States Commissioner for the Delaware River Basin Commission, i.e., the salary of the United States Commissioner and an assistant, plus incidental expenses relating to personnel benefits, travel, supplies, and other support services. This budget request is $6,000 less than the appropriations enacted for Fiscal Year 1985.

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

A request of $275,000--a decrease of $8,000 from last year's appropriation--is to provide the Federal Government's share of the $2,228,000 current expense budget for the Delaware River Basin Commission. The current expense budget covers expenses of carrying out the regular operating programs of the Commission as described in the Justifications statement previously submitted to the Committee.

Mr. Chairman, accompanying me today is Gerald M. Hansler, Executive Director of the Commission, and David McCullough, the Interior Department budget analyst who assists my Office on budgetary matters. We will try to respond to any questions you may have regarding the budget requests.

DELAWARE RIVER BASIN COMMISSION
SALARIES AND EXPENSES
F. Y. 1986 BUDGET

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Federal Representation

The Delaware River Basin Commission was created by Compact between the Delaware River Basin States (Delaware, New Jersey, New York and the Commonwealth of Pennsylvania) and the Federal Government (P. L. 87-328) for the joint management of the Basin's water and related resources.

The Compact directs the Commission to develop and implement comprehensive plans, policies and programs relating to the water resources of the Delaware Basin; to adopt and promote uniform and coordinated policies for water conservation, utilization and development in the Basin; and to encourage the planning, development and financing of water resources projects according to such plans and policies.

The Commission's membership consists of the Governors of the signatory States and a Federal Member appointed by the President to represent all Federal interests. The Federal Member historically has been the Secretary of the Interior. Each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member, and each has identical powers of the Member, including the power to vote in his absence.

It is the responsibility of the Federal Member and the United States Commissioner to protect the national interests in the affairs and programs of the Commission. The Member and Commissioner must work closely with all interested Federal departments and agencies relative to all actions by the Commission relating to the comprehensive plan and the advisability of individual water policies, programs and projects which the Commission may either propose or consider. They serve as coordinators between the Federal agencies and the Commission to eliminate duplication and to foster complementary efforts.

The F. Y. 1985 level of $174,000 includes a $2,000 supplemental appropriation request to cover pay increases. The F. Y. 1986 appropriation request of $168,000 is required to finance the salaries and expenses necessary to enable the United States Commissioner to properly represent the interests of the Federal Government in the workings of the Commission. This amount reflects the freeze-level to help control the Federal deficit.

DISTRIBUTION OF BUDGET AUTHORITY BY ACCOUNT

	1984 Actual	1985 Estimate	1986 Estimate
Appropriation: Salaries and Expenses			
Enacted to date	$191,000	$172,000	$168,000
Proposed supplemental	--	+2,000	--
Revised estimate	$191,000	$174,000	$168,000

SUMMARY OF INCREASES/DECREASES, 1986

Federal Representation:	Base for 1986	Changes	1986 Estimate
Budget Estimate, 1986	$174,000	$-6,000	$168,000

ANALYSIS BY ACTIVITIES

			(Direct Appropriations)	
	FY 1984 Amount Available	FY 1985 Amount Available	FY 1986 Estimate	Increase (+) or Decrease (-) 1985 Compared with 1986
Federal representation	$191,000	$174,000	$168,000	$-6,000
Unobligated balance lapsing	-48,000	—	—	—
Total	$143,000	$174,000	$168,000	$-6,000

JUSTIFICATION

Federal representation; Fiscal Year 1985, $174,000; Fiscal Year 1986, $168,000; decrease, $6,000.

Increase (+) or Decrease (-)		Total Program	Total Positions	Explanation
Amount	Positions			
$-6,000	—	$168,000	2	To continue to provide for the cost of operation of the Commissioner's office.

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Delaware River Basin Commission, as authorized by law (75 Stat. 716), [$172,000] $168,000. (Energy and Water Development Appropriation Act, 1985.)

Program and Financing (in thousands of dollars)

Identification code 46-0100-0-1-301	**1984 Actual**	**1985 Estimate**	**1986 Estimate**
Program by activites:			
10.00 Total obligations.............	**143**	**174**	**168**
Financing:			
25.00 Unobligated balance lapsing...	**48**		
39.00 Budget authority.........	**191**	**174**	**168**
40.00 Appropriation.................	**191**	**172**	**168**
44.20 Supplemental for civilian pay raises..................		**2**	
Relation of obligations to outlays:			
71.00 Obligations incurred, net.....	**143**	**174**	**168**
72.40 Obligated balance, start of year.........................	**13**	**22**	**22**
74.40 Obligated balance, end of year	**-22**	**-22**	**-22**
77.00 Adjustments in expired accounts.....................	**-8**		
90.00 Outlays, excluding pay raise supplemental................	**126**	**172**	**168**
91.20 Outlays from civilian pay raise supplemental..........		**2**	

Object Classification (in thousands of dollars)

Identification code 46-0100-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Personnel compensation:			
11.1 Full-time permanent...........	107	111	106
11.3 Other than full-time permanent		3	3
11.9 Total personnel compensation	107	114	109
12.1 Personnel benefits: Civilian..	11	18	18
21.0 Travel and transportation of persons.....................	9	9	9
23.1 Standard level user charges...	7	11	11
23.2 Communications, utilities, and other rent..............	1	5	5
24.0 Printing and reproduction.....	1	4	4
25.0 Other services................	7	9	9
26.0 Supplies and materials........		4	3
99.9 Total obligations...........	143	174	168

Personnel Summary

Identification code 46-0100-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Total number of full-time permanent positions	2	2	2
Total compensable workyears: Full-time equivalent employment	2	2	2
Average ES salary	$66,400	$68,700	$65,265*
Average GS grade	13.00	13.00	13.00
Average GS salary	$45,593	$45,117	$42,861*

*Reflects 5% pay cut proposed by the Administration.

Detail of Permanent Positions

	1984 Actual	1985 Estimate	1986 Estimate
Special positions at rates equal to or in excess of $68,700:			
U. S. Commissioner	1	1	1
GS/GM-13..	1	1	1
Total permanent positions	2	2	2
Unfilled positions, end of year	—	—	—
Total permanent employment, end of year	2	2	2

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Contribution to the Commission

The Delaware River Basin Commission was created by Compact (P. L. 87-328) among the States of Delaware, New Jersey and New York, the Commonwealth of Pennsylvania and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development and control of water and related resources of the Delaware River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control and development in the Basin; and to encourage the planning, development and financing of water resources projects according to such plans and policies.

The principal Members of the Commission are the Governors of the signatory States, ex officio, and a Federal Member appointed by the President of the United States. The compact also provides for the appointment of a Commissioner (alternate member) by each Governor and the President who has the identical powers of the Member, including the power to vote in his absence.

The Fiscal Year 1986 estimate requests $275,000 to cover the United States' share of the $2,228,000 current expense budget of the Delaware River Basin Commission. The request is $8,000 less than the F. Y. 1985 appropriation. Authority for United States participation in the current expense budget of the Commission is provided under Section 13.3 of the Delaware River Basin Compact (P. L. 87-328, approved September 27, 1961).

The F. Y. 1986 current expense budget for the Commission totals $2,228,000 and represents a $84,200 increase over the F. Y. 1985 current expense budget. Most of this increase is for personnel costs and within-grade increases.

In F. Y. 1986, 38 positions will be funded, which is the same as the F. Y. 1985 level.

The Delaware River Basin Compact mandates activities and provides discretionary authority for a broad range of water resources planning, design, construction and operating functions. In Fiscal Year 1985, the mandated activities will be continued, and essential discretionary planning and operating functions will be performed.

Mandated Activities:

The Compact requires (1) the preparation and maintenance of an up-to-date Comprehensive Plan, (2) the issuance of an annual Water Resources Program, (3) the review of projects having a substantial effect on the water resources of the Basin, (4) the administration of uniform and coordinated standards and procedures and (5) the publication of an annual report.

1. Comprehensive Plan: In F. Y. 1986, the Comprehensive Plan will continue to be revised to include Commission decisions flowing from the Level B Study and the "Good Faith" negotiations. This activity will require public hearings before the Commission on a series of issues. Intergovernmental coordination efforts with respect to matters impacting the Basin will continue.

2. Water Resources Program: A Water Resources Program will be prepared, subjected to public hearing, modified as appropriate, approved by the Commission and published. The Water Resources Program will include a systematic presentation of (1) the quantity and quality of water resources needs, (2) the projects* required to satisfy these needs and (3) a separate statement of the projects proposed to be undertaken by the Commission during the ensuing six years.

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* "Project" is defined by the Compact as "any work, service or activity," as well as water-related facilities or additions to such facilities.

3. Project Review: Water, or water-related, projects proposed for implementation by any person, corporation or government authority will be reviewed for conformance with the Comprehensive Plan. These reviews, conducted in accordance with the duly issued Rules of Practice and Procedure, will result in recommended courses of action by the Commission.

4. Uniform Standards and Procedures and Their Enforcement: Uniform standards and procedures will be established for the evaluation of projects affecting the Basin and for the determination of project priorities pursuant to the requirements of the Comprehensive Plan; uniform and coordinated policies for water conservation use and management will be promoted. Appropriate enforcement action(s) will be taken where necessary to protect the provisions of the Comprehensive Plan and any standards, regulations, or docket decisions duly promulgated by the Commission.

5. Annual Report: A report on the activities and finances of the Commission for the calendar year will be prepared, published and distributed to the legislative bodies of the signatory parties and the public.

Planning Activities:

Planning programs will be under way in F. Y. 1986 relating to (1) ground water, (2) water demands, (3) flood loss reduction, (4) pollution control, (5) fish, wildlife and recreation and (6) electric power.

1. Ground Water: The Basinwide ground water investigation, initiated in 1979, was completed in F. Y. 1983. Study recommendations regarding operational concepts will continue to be reviewed for inclusion within the Comprehensive Plan following public hearings. Well registrations by the Basin States will be continued, and a data management program will be instituted for the Basin.

2. Water Demands and Conservation: The basic elements of water demand projections, i.e., population, unit water uses, economic base, etc., will be compiled utilizing 1980 census data. A depletive water use budget, adopted in F. Y. 1985, will be fine tuned. The Commission has continuing long-term policies to reduce water use throughout the Basin through conservation efforts and to require maximum feasible efficiency in the use of water by new and existing water users. Recommendations received from the Commission's Water Conservation Advisory Committee will be considered.

3. Flood Loss Reduction: Work will continue on a comprehensive Basinwide flood loss reduction plan and be considered by the Commission for possible inclusion within its Comprehensive Plan.

4. Pollution Control: The multi-faceted pollution control program totalling $694,600 will continue in F. Y. 1986, funded in part with a proposed $240,000 grant from the Federal Environmental Protection Agency. The program will encompass the following activities in F. Y. 1986:

Allocation of Estuary Waste Assimilative Capacity. The reallocation of the assimilative capacity of Zones 2 through 5 of the Delaware River will be continued during F. Y. 1986 in close association with the U. S. Environmental Protection Agency, the States of Delaware, New Jersey and Pennsylvania, and 208 planning agencies. This activity will require mathematical model computer runs, notices of preliminary allocations, hearings on objections before hearing panels, reports to the Commission by the panels and Commission decision. This is expected to be a major pollution control activity in F. Y.'s 1985 and 1986.

Zone 2 Study. Studies initiated in F. Y. 1981 (but delayed due to funding cutbacks) leading to a plan--both engineering and financial--to solve the problems in the Delaware estuary Zone 2 caused by non-point loads will be continued in F. Y. 1986 if funds are available.

Water Quality Data Collection. The Commission will compile and make available to interested parties data on the quality of Basin surface and ground waters. The Commission will act as the cooperating agent with the U.S.G.S. for some monitors in the estuary.

Water Quality Standards. The Commission will continue to develop and adopt interstate water quality standards that are consistent with the laws of the land and the water management plan of the Basin.

Coordination. The interstate aspects of state water quality programs will be coordinated by the Commission. The reports required by P. L. 92-500, Section 305(b), will be prepared by the Commission for the interstate Delaware River.

5. Fish and Recreation: The Commission will continue to assist the National Park Service in developing the land management plan associated with the Upper Delaware Scenic and Recreation River. This activity will be in cooperation with the Service, the States of New York and Pennsylvania, and the counties bordering the River. The plan will be considered for inclusion in the Delaware River Basin Commission's Comprehensive Plan.

Liaison and coordination with fish management agencies will continue with respect to issues pending before the Commission.

6. Electric Power: The Commission and Pennsylvania have been issued a construction license by the Federal Energy Regulatory Commission (FERC) for developing hydropower at the Blue Marsh Reservoir. An additional feasibility study of the potential of a small hydroelectric plant to use modular components and "pumps as turbines" at Blue Marsh Reservoir was completed in F. Y. 1984. Detailed design of that project will be completed in F. Y. 1985, with construction starting in F. Y. 1986.

Contact will be maintained with the electric power companies to keep abreast of water demands related to the industry and modifications foreseen to their Master Siting Study.

Operating Activities:

The water sales program, adopted by the Commission pursuant to Resolution Nos. 72-4 and 74-6, will be administered. This program involves execution of contracts with major water users and the assessment of fees against minor water users under the self-administering arrangement. The legal entitlement program as it relates to municipal and industrial withdrawers of water was completed in F. Y. 1979. In F. Y. 1986, new water sales contracts will be negotiated, current contracts monitored, and self-invoicing procedures spot-checked. Field checking of water users' facilities will be carried out, as staff time permits.

Ground Water Protected Area:

Under contractual arrangements with the State of Pennsylvania, the Commission will continue to administer special regulations regarding the use of ground water in portions of Berks, Bucks, Chester, Lehigh and Montgomery Counties, Pennsylvania. These special regulations will apply to the Commission's designated "Southeastern Pennsylvania Ground Water Protected Area." In addition to meeting all current requirements of the Comprehensive Plan and Rules of Practice and Procedures, applicants seeking permission to withdraw more than 10,000 gallons per day will be required to demonstrate that the requested use would not (1) render supplies in the underground Basin unreliable, (2) cause long-term progressive lowering of water levels, (3) cause water quality degradation, (4) result in permanent loss of storage capacity nor (5) substantially impact perennial streams. Such applicants will be required to take a number of conservation measures and file a drought emergency plan with the Commission. All present users of more than 10,000 gallons per day will be required to register their wells with the Commission in order to attain the protection offered by the declaration.

CURRENT EXPENSE BUDGET
F. Y. 1986

	Revised FY 1984 Budget	Revised FY 1985 Budget	FY 1986 Request	(+) Increase (-) Decrease
Revenues:				
Signatory Parties:				
Delaware	$ 158,800	$ 166,800	$ 175,300	$+ 8,500
New Jersey	398,000	443,000	473,300	+30,300
New York	180,000	265,000	263,000	- 2,000
Pennsylvania	613,200	643,900	682,500	+38,600
Federal Government	269,000	283,000	275,000	- 8,000
Miscellaenous:				
Other	46,000	62,100	66,400	+ 4,300
Fund Balance	37,800	50,000	52,500	+ 2,500
EPA Water Quality Grant	230,000	230,000	240,000	+10,000
Contingency	108,900	-0-	-0-	—
Total	$2,041,700	$2,143,800	$2,228,000	$+84,200
Expenditure Categories:				
Personal Services	$1,222,000	$1,290,300	$1,363,800	$+73,500
Special and Contractual Services	214,000	214,000	215,000	+ 1,000
Services Other Than Personal	26,800	27,000	28,000	+ 1,000
Supplies and Materials	35,000	45,000	45,000	—
Space	170,000	180,000	185,000	+ 5,000
Communications	50,000	50,000	50,000	—
Travel	18,000	22,000	22,000	—
Maintenance and Replacements	27,900	31,000	33,000	+ 2,000
Equipment Purchase or Rental	28,000	34,500	35,000	+ 500
Grants, Fringe Benefits and Other	250,000	250,000	251,200	+ 1,200
Total	$2,041,700	$2,143,800	$2,228,000	$+84,200

F. Y. 1986 FEDERAL FUNDING SUMMARY

Revenues:	
DRBC Payment to Corps of Engineers (Repayment of Water Supply Storage)	$614,000
DRBC Payment to U.S.G.S. (Stream Gauges)	58,000
	$672,000
Expenditures:	
Regular Federal Contribution to DRBC	$275,000
EPA Water Quality Grant	240,000
	$515,000

F. Y. 1986 CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

COMPARISON OF FUNDING

Appropriation/Activity	Budget Authority 1984 Actual	 1985 Estimate	 1986 Estimate
CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION	$269,000	$283,000	$275,000

SUMMARY OF INCREASES/DECREASES FOR 1986 BY ACTIVITY

	1986 Base	1986 Estimate	Increase (+) or Decrease (-)
Activity: Contribution to the Commission..............	$283,000	$275,000	$-8,000

To provide for the Federal share of the 1986 annual expenses of the Delaware River Basin Commission.

JUSTIFICATION

Contribution to the Commission: Fiscal Year 1985, $283,000; Fiscal Year 1986, $275,000; decrease, $8,000.

Increase (+) or Decrease (-) Amount	 Positions	Total Program	Total Positions	Explanation
$-6,000	—	$275,000	—	To provide for the Federal share of the Delaware River Basin Commission's 1986 current expense budget.

Contribution to Delaware River Basin Commission

For payment of the United States share of the current expenses of the Delaware River Basin Commission, as authorized by law (75 Stat. 706,707), [$283,000] $275,000 (Energy and Water Development Appropriation Act, 1985.)

Program and Financing (in thousands of dollars)

Identification code 46-0102-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Program by activites:			
10.00 Total obligations (object class 41.0)..................	269	283	275
Financing:			
40.00 Budget Authority.........	269	283	275
Relation of obligations to outlays:			
71.00 Obligations incurred, net.....	269	283	275
90.00 Outlays......................	269	283	275

SUSQUEHANNA RIVER BASIN COMMISSION

STATEMENT OF WARNER M. DEPUY, U.S. COMMISSIONER

Again, it is a pleasure to appear before you. I do this in a dual capacity, in support of the appropriation request for salaries and expenses for the Office of the United States Commissioner and also for the Federal Contribution to the Susquehanna River Basin Commission.

This Federal-Interstate Compact Commission was established pursuant to Public Law 91-575 among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The Compact serves as the vehicle to produce the most efficient service in the public interest in the conservation, utilization, development, management and control of the water resources of the Basin.

The Commission's membership consists of the Governors of the signatory states, or their appointed designees, and a Federal Member appointed by the President to represent all Federal Agencies. Historically, the Federal Member has been the Secretary of the Interior. In addition, each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member with identical powers of the Member, including the power to vote in the absence of the Member. The non-Federal staff of the Commission receives direction from the Members of the Commission through their alternates.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resource development programs for the Susquehanna River Basin. To accomplish this, the Member and the Commissioner must work closely with all interested Federal Departments and Agencies, serving as coordinators to assure that Federal interests are fully informed regarding all water resources development programs for the Susquehanna River Basin. They also represent Federal interests in all actions by the Commission relating to the comprehensive plan and the advisability of individual water resource policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

The 1986 budget request for Federal representation on the Susquehanna River Basin Commission is proposed at the freeze level of $163,000 to help control the Federal deficit. This amount will enable the United States Commissioner to carry out his responsibilities to protect the Federal Government's interests in the Susquehanna River Basin.

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

A request of $230,000 is to provide for the Federal Government's share of the $1,483,000 current expense budget of the Commission, and is the same amount as appropriated for fiscal year 1985. The current expense budget covers expenses of the staff and the regular operating programs of the Commission.

Mr. Bielo, the Executive Director of the Commission, is accompanying me today and has submitted a statement to the Committee which briefly outlines some of our achievements. We will be happy to answer any questions you have regarding the Commission's current activities and new program initiatives proposed for fiscal year 1986.

STATEMENT OF ROBERT J. BIELO, EXECUTIVE DIRECTOR

Mr. Chairman and Members of the Committee:

On behalf of the Susquehanna River Basin Commission, I want to express our appreciation for this opportunity to appear before you today to report on our continuing programs and to request your support for the proposed Federal share of the Commission's 1986 operating budget. In my report I have emphasized our concern for the continuing high annual costs of flood damage in the Susquehanna River Basin.

Our basic work programs are dictated, at least in general terms, by our Federal-Interstate Compact. Our programs must address the topics of flood plain management, water supply, water quality, watershed management, recreation, fish and wildlife and the natural amenities of the Basin.

Over the 13 years of our existence we have directed approximately 75% of our efforts to programs dealing with flood damage reduction, water supply, including groundwater concerns and water quality.

In our current budget request we are continuing a high level of effort in the area of flood damage reduction. The Susquehanna Basin comprises less than 1% of the nation's land area, yet it contributes almost 10% of the national average flood damages. As an example, high damage producing flood events occurred in the Basin in December 1983 and February, April, June and August 1984. This continuing frequency of flooding has resulted in estimated annual flood damages of $82,500,000.

For several years the Susquehanna Commission has promoted self-help flood damage reduction programs at the county and community level. Of the estimated 1,100 flood prone communities in the Basin, 488 are included in either a local or a regional self-help damage reduction program.

Critical to the success of this program is the availability of timely and accurate flood forecasts. A number of accredited studies have demonstrated that timely forecasts can save lives and reduce property damages. The potential for damage reduction benefits ranges from a low of 2:1 to a high of 100:1. Obviously flood prone communities that have damage reduction plans in effect can realize much higher levels of benefits than those that have not engaged in preparedness planning. The need to expand and improve the National Weather Service forecasting and warning system in our Basin cannot be over emphasized. Conservative estimates indicate damage reduction benefits accruing to such improvements would range from 10 to 30% or some $8 to $20 million annually.

It is one of our goals to bring Federal, State and local governments and private interests into a partnership whereby the existing National Weather Service forecasting system can be improved and local preparedness expanded to include all flood prone communities.

Development of plans and programs to deal with water management as it relates to availability of supplies for domestic, municipal and industrial uses continues as a high priority activity of the Commission. Included in this program are groundwater investigations which expand upon earlier work of the Commission and others in areas of intense groundwater use.

By the end of 1985, we expect to have completed special studies related to the reformulation of the Cowanesque Lake Federal flood control/recreation project in the Basin to include some increment of storage for water supply purposes.

Should the studies be favorable we would look to your Committee for support regarding necessary redevelopment of the project. Such action would result in an extremely favorable pay back to the Federal Government.

Water quality throughout most of the Basin is generally good. The Commission, in cooperation with the State and the Environmental Protection Agency has made regular assessments of the water quality of stream segments of interstate concern. Assessments of special problem areas are also included in these annual programs.

In fiscal year 1985 the Susquehanna Commission has initiated a 12 station study of nutrient loading from watersheds subjected to different types of land use. The data gathered from this study will be provided to the Environmental Protection Agency's Chesapeake Bay Study and to the States. The EPA-Bay program will use the data in refining its original Bay-tributary nutrient model. The States will apply the findings in targeting their nutrient reduction efforts.

The restoration of anadromous fish runs to the Susquehanna River remains a goal of the Commission and all of its signatory parties. The Commission has served as a coordinator and as an active participant in this effort. Basic concerns include development of stocks of American shad that have the inclination to migrate up the Susquehanna River to spawn, and to bring about construction of fish passage facilities at dams on the lower Susquehanna River which bar migration.

In summary, this report very briefly outlines the direction and general scope of our programs. The budget document carries more program information, and we would be pleased to provide whatever level of detail desired regarding our activities.

In closing, I would respectfully request your support for the proposed Federal share of our fiscal year 1986 operating expenses in the amount of $230,000 as indicated in the President's budget request.

SUSQUEHANNA RIVER BASIN COMMISSION
SALARIES AND EXPENSES
FY 1986 BUDGET

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Federal Representation

The Susquehanna River Basin Commission was created by Compact (Public Law 91-575) among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development, and control of water and related resources in the region of the Susquehanna River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies, and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control, and development in the Basin; and to encourage the planning, development, and financing of water resources projects according to such plans and policies.

The Commission's membership consists of the Governors of the signatory states, or their appointed designees, and a Federal Member appointed by the President to represent all Federal Agencies and who historically has been the Secretary of the Interior. In addition, each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member, with identical powers of the Member, including the power to vote in the absence of the Member.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resource development programs for the Susquehanna River Basin. To accomplish this, the Member and the Commissioner must work closely with all interested Federal Departments and Agencies, serving as coordinators to assure that Federal interests are fully informed regarding all water resources development programs for the Susquehanna River Basin. They also represent such Federal interests in all actions by the Commission relating to the comprehensive plan and the advisability of individual water resource policies, programs, and projects which the Commission may propose or consider.

The 1986 budget request for Federal representation on the Susquehanna River Basin Commission is proposed at the freeze level of $163,000 to help control the Federal deficit. This amount will enable the United States Commissioner to carry out his responsibilities to protect the Federal Government's interests in the Susquehanna River Basin.

DISTRIBUTION OF BUDGET AUTHORITY BY ACCOUNT

Appropriation: Salaries and Expenses	1984 Actual	1985 Estimate	1986 Estimate
Enacted to date	$191,000	$167,000	$163,000
Proposed supplemental	—	2,000	—
Revised estimate	$191,000	$169,000	$163,000

SUMMARY OF INCREASES/DECREASES, 1986

Federal Representation:	Base for 1986	Changes	1986 Estimate
Budget Estimate, 1986	$169,000	$-6,000	$163,000

ANALYSIS BY ACTIVITIES

(Direct Appropriations)

Activity	FY 1984 Amount Available	FY 1985 Amount Available	FY 1986 Estimate	Increase (+) or Decrease (-) 1985 Compared with 1986
Federal representation	$191,000	$169,000	$163,000	$-6,000
Unobligated balance lapsing	-54,000	—	—	—
Total	$137,000	$169,000	$163,000	$-6,000

JUSTIFICATION

Federal representation; Fiscal Year 1985, $169,000; Fiscal Year 1986, $163,000; decrease, $6,000.

Increase (+) or Decrease (-) Amount	Increase (+) or Decrease (-) Positions	Total Program	Total Positions	Explanation
$-6,000	—	$163,000	2	To continue to provide for the cost of operation of the Commissioner's office.

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1541), [$167,000] $163,000. (Energy and Water Development Appropriation Act, 1985.)

Program and Financing (in thousands of dollars)

Identification code 46-0500-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Program by activites:			
10.00 Total obligations.............	137	169	163
Financing:			
25.00 Unobligated balance lapsing...	54		
39.00 Budget authority.........	191	169	163
40.00 Appropriation..................	191	167	163
44.20 Supplemental for civilian pay raises..................		2	
Relation of obligations to outlays:			
71.00 Obligations incurred, net.....	137	169	163
72.40 Obligated balance, start of year.........................	13	13	13
74.40 Obligated balance, end of year	-13	-13	-13
77.00 Adjustments in expired accounts.....................	-10		
90.00 Outlays, excluding pay raise supplemental................	127	167	163
91.20 Outlays from civilian pay raise supplemental..........		2	

Object Classification (in thousands of dollars)

	1984 Actual	1985 Estimate	1986 Estimate
Personnel compensation:			
11.1 Full-time permanent...........	107	111	106
11.3 Other than full-time permanent		3	3
11.9 Total personnel compensation	107	114	109
12.1 Personnel benefits: Civilian..	10	18	18
21.0 Travel and transportation of persons......................	4	5	5
23.1 Standard level user charges...	6	11	11
23.2 Communications, utilities, and other rent..............	1	5	5
24.0 Printing and reproduction.....	1	4	4
25.0 Other services................	6	8	8
26.0 Supplies and materials.........	1	4	3
31.0 Equipment......................	1		
99.9 Total obligations...........	137	169	163

Personnel Summary

Identification code 46-0500-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Total number of full-time permanent positions	2	2	2
Total compensable workyears:			
Full-time equivalent employment ...	2	2	2
Average ES salary....................	$66,400	$68,700	$65,265*
Average GS grade.....................	13.00	13.00	13.00
Average GS salary	$43,593	$45,117	$42,861*

*Reflects 5% pay cut proposed by the Administration.

SALARIES AND EXPENSES
DETAIL OF PERMANENT POSITIONS

	1984 actual	1985 estimate	1986 estimate
Special positions at rates equal to or in excess of $68,700:			
U.S. Commissioner	1	1	1
GS/GM-13	1	1	1
Total permanent positions.......	2	2	2
Unfilled positions, end of year.....	--	--	--
Total permanent employment, end of year	2	2	2

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION
FY 1986 BUDGET

JUSTIFICATION OF PROGRAM AND PERFORMANCE

The Susquehanna River Basin Commission was created by Compact (Public Law 91-575) among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development, and control of water and related resources in the region of the Susquehanna River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies, and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control, and development in the Basin; and to encourage the planning, development, and financing of water resources projects according to such plans and policies.

The principal Members of the Commission are the Governors of the signatory States, or their appointed designees, and a Federal Member appointed by the President. The Compact also provides for the appointment of a Commissioner (alternate member) by each Governor and the President with identical powers of the Member and power to vote in the absence of the Member.

The fiscal year 1986 estimate requests $230,000 to cover the Federal Government's share of the $1,483,000 current expense budget of the Susquehanna River Basin Commission. The request is the same as appropriated for fiscal year 1985. Authority for the Federal Government's participation in the current expense budget of the Commission is provided for under Section 14.3 of the Susquehanna River Basin Compact (Public Law 91-575, approved December 24, 1970).

The fiscal year 1986 current expense budget for the Commission totals $1,483,000 and represents an increase of $17,700 over its fiscal year 1985 budget. This increase includes $7,000 for incremental costs of salaries and benefits, and an increase of $11,500 for taxes, utilities, supplies, automotive and office equipment. An $800 reduction in contractural services is expected.

In fiscal year 1986, 27 positions will be funded -- one additional position over the level of staff in fiscal year 1985.

The Susquehanna River Basin Commission's fiscal year 1986 operating budget of $1,483,000 will support the following programs:

Introduction

The Susquehanna River Basin Commission's fiscal year 1986 programs address, at the Basin level, current water resources issues of national, regional, and local concern. Examples are work in the areas of flood damage reduction, surface and groundwater management and protection and nonpoint source pollution.

Flood Plain Management and Protection

This program has received continuing attention by the Commission due to the high flood risk in the Basin and the extremely large number of Basin communities located in high flood hazard areas.

Program emphasis is directed toward providing technical assistance and development of self-help flood damage reduction products readily usable by local government and industry, such as flood stage maps, flood damage reduction manuals and self-help warning and damage reduction training seminars.

Water Resources Management

The Commission's efforts in water management will be shifted from collection of basic information regarding availability of supplies, existing supply systems, water needs and the development of necessary water technical and engineering tools to the preparation of a carefully planned regional water management program. The program will serve as a guide for future municipal, industrial and agricultural water supply development in the Basin.

Areas of special concern include management and protection of groundwater supplies and low flow and drought emergency management.

Water Resources Quality Management and Protection

Water quality activities will continue at a high level of priority in fiscal year 1986 with program emphasis on increased monitoring of nonpoint source contributions. Special effort will be directed to identifying major nutrient loading sources throughout the Basin in cooperation with Pennsylvania and Maryland and the Environmental Protection Agency's Chesapeake Bay Program.

Watershed Management and Protection

These program activities will be coordinated with the nonpoint source monitoring program to identify specific areas and land uses requiring priority action under state and federal programs.

Recreation, Fish and Wildlife

The program objective is to preserve and/or enhance existing water-related outdoor recreation and where possible to expand these opportunities. A prime example is the Commission's effort to achieve restoration of diadromous fishes to the Susquehanna River. Another area of major concern involves development of a data base and methodology for assessing instream flow needs.

Coordination

The Commission serves to coordinate various federal, state and local programs affecting water resources in the Basin. The Comprehensive Plan serves as a basis for developing common approaches to resolution of problems and conflicts. The programs involved are flood control, water supply, water quality, recreation and fish and wildlife, and watershed management activities.

Project Review

The Commission is charged with the responsibility of conducting reviews of certain projects to assure they are compatible with the Comprehensive Plan. These reviews may require in some cases extensive technical and administrative analysis, as well as public hearings. Examples are relicensing of hydroelectric facilities, licensing of new electric generating facilities, industrial and municipal withdrawals from surface and/or groundwaters, significant discharges to waters of the Basin, and flood control projects.

FY 1986 OPERATING BUDGET

	FY-1984 Budget	FY-1985 Budget	FY-1986 Budget
Revenues:			
Signatory Parties:			
Maryland	$ 230,000	$ 230,000	$ 235,000
New York	230,000	230,000	235,000
Pennsylvania	230,000	230,000	235,000
Federal Government	230,000	230,000	230,000
Other Revenues:			
Cowanesque Water Supply Project	-0-	231,000	109,500
Grant, EPA-Water Quality (106)	60,000	60,000	60,000
Sale of Publications & Misc. Inc.	50,000	50,000	50,000
Building Rental Income	38,000	40,000	40,000
Fiscal Stabilization Fund	141,100	164,300	288,500
TOTAL ALL SOURCES	$1,209,100	$1,465,300	$1,483,000
Expenditures:			
Personal Services	$ 780,000	$ 850,000	$ 855,000
Fringe Benefits	203,500	265,000	267,000
Special & Contractual Services	34,700	95,400	94,600
Travel & Subsistence, Meetings	22,000	37,000	37,000
Communications, Postage	13,500	15,000	15,000
Rent-Machinery & Equipment	1,500	10,600	10,600
Printing, Reproduction, Legal Ads	22,500	23,000	23,000
Repairs & Maint.-Bldg. & Equip.	12,000	14,500	14,500
Other Contractual Services	9,800	11,000	11,000
Taxes, Utilities, Janitorial Services	47,500	56,000	56,500
Mortgage Payments	22,400	25,000	25,000
Supplies & Materials	19,500	37,800	41,800
Misc. Expenses	7,700	8,500	8,500
Automotive & Office Equipment	12,500	16,500	23,500
TOTAL EXPENDITURES	$1,209,100	$1,465,300	$1,483,000

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

COMPARISON OF FUNDING

Appropriation/Activity	Budget Authority 1984 actual	 1985 estimate	 1986 estimate
CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION.....................	$230,000	$230,000	$230,000

SUMMARY OF INCREASES/DECREASES FOR 1986 BY ACTIVITY

	1986 Base	1986 Estimate	Increase (+)or Decrease (-)
Activity: Contribution to the Commission	$230,000	$230,000	--

To provide for the 1986 Federal share of the annual expenses of the Susquehanna River Basin Commission.

JUSTIFICATION

Contribution to the Commission: Fiscal year 1985, $230,000; fiscal year 1986, $230,000; No increase.

Increase (+) or Decrease (-) Amount	 Positions	Program	Positions	Explanation
--	--	$230,000	--	Federal contribution to 1986 current expense budget of the Susquehanna River Basin Commission.

Contribution to Susquehanna River Basin Commission

For payment of the United States share of the current expenses of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1530, 1531), $230,000. (Energy and Water Development Appropriation Act, 1985.)

Program and Financing (in thousands of dollars)

Identification code 46-0501-0-1-301	1984 Actual	1985 Estimate	1986 Estimate
Program by activites:			
10.00 Total obligations (object class 41.0)..................	230	230	230
Financing:			
40.00 Budget Authority.........	230	230	230
Relation of obligations to outlays:			
71.00 Obligations incurred, net.....	230	230	230
90.00 Outlays......................	230	230	230

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

STATEMENT OF ANNE A. EYLER, CHAIRMAN

THANK YOU, MR. CHAIRMAN, FOR THIS OPPORTUNITY TO SUPPORT THE FISCAL YEAR 1986 FEDERAL APPROPRIATION FOR THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN. MY NAME IS ANNE EYLER. I AM THE CHAIRMAN OF THE COMMISSION AND ONE OF THREE COMMISSIONERS APPOINTED BY THE GOVERNOR OF WEST VIRGINIA. I HAVE WITH ME, PAUL EASTMAN, EXECUTIVE DIRECTOR OF THE COMMISSION.

THE PRESIDENT'S FISCAL YEAR 1986 BUDGET RECOMMENDED NO APPROPRIATION FOR ICPRB. WE REQUESTED $79,000 AS THE FAIR FEDERAL SHARE OF THE TOTAL BUDGET OF $746,000. THE ICPRB INCLUDES THREE COMMISSIONERS APPOINTED BY PRESIDENT REAGAN, WHO REPRESENT THE INTERESTS OF THE FEDERAL GOVERNMENT, ONE OF THE LARGEST WATER USERS AND RIPARIAN LANDOWNERS ON THE RIVER. THE FEDERAL SHARE HISTORICALLY HAS BEEN EQUAL TO THE LARGEST OF THE REQUESTED STATE CONTRIBUTIONS, WHICH IS FROM MARYLAND. IT IS TANGIBLE EVIDENCE OF THE FULL AND EQUAL FEDERAL PARTNERSHIP IN A VITAL JOINT MISSION.

THE AUTHORITY FOR THE FEDERAL APPROPRIATION TO ICPRB IS ARTICLE IV OF THE POTOMAC BASIN COMPACT AS AMENDED BY PUBLIC LAW 92-407, 91st CONGRESS, IN SEPTEMBER 1970. IT STATES "THE MONEYS NECESSARY TO FINANCE THE COMMISSION IN THE ADMINISTRATION OF ITS BUSINESS IN THE CONSERVANCY DISTRICT SHALL BE PROVIDED THROUGH APPROPRIATIONS FROM THE SIGNATORY BODIES (THAT IS, THE DISTRICT OF COLUMBIA, MARYLAND, PENNSYLVANIA, VIRGINIA AND WEST VIRGINIA) AND THE UNITED STATES..." CONGRESS HAS REAFFIRMED ITS ORIGINAL MANDATE BY APPROPRIATING FUNDS TO THE COMMISSION FOR A FEDERAL SHARE EVERY YEAR BEGINNING WITH FISCAL YEAR 1949.

YOU HAVE OUR BUDGET JUSTIFICATION SO I WILL ONLY BRIEFLY HIGHLIGHT MAJOR WORK PROGRAM ITEMS IN THIS SUMMARY STATEMENT.

THE ICPRB SECTION ON COOPERATIVE WATER SUPPLY OPERATIONS (CO-OP) DEVELOPED AND IS IMPLEMENTING THE TECHNICAL FRAMEWORK

FOR ASSURING ADEQUATE WATER FOR THE NATIONAL CAPITAL AREA INTO THE NEXT CENTURY. THIS FRAMEWORK WAS INSTITUTIONALIZED WITH THE SIGNING IN JULY 1982 OF EIGHT SEPARATE AGREEMENTS AMONG ICPRB, THE FEDERAL GOVERNMENT, THE DISTRICT OF COLUMBIA, MARYLAND, VIRGINIA, AND TWO REGIONAL WATER UTILITIES. THE U.S. ARMY CORPS OF ENGINEERS ACCEPTED THIS LOW-COST COOPERATIVE SOLUTION AS BY FAR THE BEST IN ITS 1983 METRO WASHINGTON WATER SUPPLY REPORT TO CONGRESS. IT SAVES OVER $200 MILLION IN CAPITAL COSTS AS COMPARED WITH THE PREVIOUSLY RECOMMENDED LEAST COSTLY STRUCTURAL SOLUTION. THE SAVINGS OF MILLIONS ARE IN STARK CONTRAST TO OUR TOTAL ANNUAL BUDGET OF LESS THAN $750,000 AND OUR FEDERAL APPROPRIATION REQUEST OF $79,000.

THE DROUGHT MANAGEMENT SYSTEM BEING IMPLEMENTED BY CO-OP DEPENDS ON (1) EARLY DETECTION OF DROUGHTS, BASED ON LONG-RANGE STREAMFLOW FORECASTS, (2) ACCURATE SHORT-TERM WATER USE AND SUPPLY FORECASTS DURING DROUGHT PERIODS, AND (3) OPTIMAL ALLOCATION OF SUPPLIES ON A REGIONAL BASIS DURING DROUGHT PERIODS.

EACH YEAR, DURING THE LATE SUMMER, CO-OP, THE WATER UTILITIES AND THE CORPS OF ENGINEERS HAVE A DROUGHT EXERCISE. CO-OP SIMULATES DROUGHT CONDITIONS ON ITS COMPUTER FOR THE UTILITIES. THE GROUP THEN SIMULATES THE COORDINATED OPERATION OF THE UPSTREAM BLOOMINGTON AND LITTLE SAVAGE RESERVOIRS, THE LOCAL RESERVOIRS AND THE THE POTOMAC RIVER INTAKES TO ENSURE ADEQUATE WATER SUPPLY DURING THE SIMULATED DROUGHT. ALL CONCERNED THUS HAVE OPERATING EXPERIENCE WITH DROUGHT CONDITIONS, RANGING FROM MILD TO SEVERE, WHEN A REAL DROUGHT OCCURS. IN ADDITION, IMPROVEMENTS IN COMPUTER PROGRAMS AND OTHER ASPECTS OF COORDINATED OPERATIONS ARE INCORPORATED AND TESTED DURING THE ANNUAL EXERCISES.

1984 MARKED THE COMPLETION OF THE MULTI-PURPOSE LITTLE SENECA RESERVOIR IN THE MARYLAND SUBURBS OF THE NATIONAL CAPITAL AREA. IT WAS JOINTLY FINANCED BY THE REGIONAL WATER UTILITIES

UNDER THE 1982 AGREEMENTS AND, THOUGH RELATIVELY SMALL IN BOTH SIZE AND COST, IT ENHANCES THE EFFICIENCY OF THE COORDINATED OPERATIONS SYSTEM. FLOW RELEASES FROM THE CORPS' BLOOMINGTON RESERVOIR, WHICH TAKE ALMOST A WEEK TO REACH THE METRO AREA WATER INTAKES, CAN BE FINELY TUNED WITH THE COMPLETION OF LITTLE SENECA RESERVOIR. THE LATTER, WHICH IS LESS THAN A DAY UPSTREAM FROM THE INTAKES, CAN MAKE UP FOR SHORTAGES RESULTING FROM THE UNCERTAINTY OF POTOMAC NATURAL FLOWS.

WE FEEL COMPLIMENTED THAT THE DEPARTMENT OF INTERIOR ASKED THE CO-OP DIRECTOR TO EXPLORE THE POSSIBILITIES FOR INCREASED YIELD FROM BUREAU OF RECLAMATION PROJECTS IN SEVERAL WESTERN STATES BASED ON EXPERIENCE WITH THE SUCCESSFUL TECHNIQUES EMPLOYED IN THE POTOMAC BASIN. THAT SHORT-TERM INTERGOVERNMENTAL PERSONNEL ASSIGNMENT IS JUST NOW BEING COMPLETED AND THE RESULTS ARE VERY PROMISING.

ICPRB ALSO HAS ACCEPTED THE CHALLENGE OF A LEADERSHIP ROLE IN CONTINUING THE IMPROVEMENT OF WATER QUALITY IN THE POTOMAC ESTUARY, THE LARGEST ARM OF CHESAPEAKE BAY. THIS IS A CONTINUATION OF OUR FOLLOW-UP TO THE DECEMBER 1983 CHESAPEAKE BAY CONFERENCE AND EARLIER USEPA REPORTS ON THE BAY. IT IS EVEN MORE IMPORTANT BECAUSE OF THE EXTRAORDINARY BLUE-GREEN ALGAE BLOOM IN THE UPPER ESTUARY DURING THE SUMMER OF 1983 AND THE APPEARANCE OF THE NUISANCE SUBMERSED AQUATIC PLANT (HYDRILLA).

ICPRB ORGANIZED AND CHAIRS THE HYDRILLA REGIONAL ACTION COMMITTEE (HYDRAC) TO PROMOTE MANAGEMENT MEASURES TO PREVENT THE DAMAGING SPREAD OF THIS NUISANCE PLANT. AS A RESULT OF HYDRAC'S EFFORTS, THE CORPS OF ENGINEERS' BALTIMORE DISTRICT RECEIVED FUNDS LAST SUMMER TO START A HYDRILLA CONTROL DEMONSTRATION PROGRAM AND I COMPLIMENT THE CORPS FOR ITS PROMPT REACTION. HYDRAC IS NOW ASSISTING THE CORPS IN THE PLANNING AND COORDINATION OF HYDRILLA CONTROL ACTIVITIES NEXT YEAR AND BEYOND. BY 1986 WE ANTICIPATE THE PROGRAM WILL HAVE PROGRESSED FROM THE DEMONSTRATION PHASE TO A FULL-SCALE MANAGEMENT PROGRAM.

ICPRB IS WORKING WITH A SPECIAL PANEL OF ALGAE AND ESTUARINE EXPERTS AND OTHERS (USEPA, DC, MD, VA, AND METRO WASHINGTON COUNCIL OF GOVERNMENTS) TO DETERMINE THE CAUSES AND POSSIBLE CORRECTIONS OF THE EXTRAORDINARY ALGAE BLOOM OF 1983. THE UNUSUALLY HEAVY SPRING RUNOFF LADEN WITH NONPOINT SOURCE NUTRIENTS FROM THE UPPER BASIN; THE LOW SUMMER POTOMAC FLOWS; THE POINT SOURCE NUTRIENT DISCHARGES; AND OTHER FACTORS HAVE BEEN INVESTIGATED ALONG WITH POSSIBLE MEANS OF CONTROL. THE EXPERT PANEL'S REPORT IS DUE FOR PUBLIC RELEASE THIS MONTH. IT REMINDS US THAT MUCH REMAINS TO BE DONE EVEN THOUGH THERE HAVE BEEN OBVIOUS NET GAINS FOR THE POTOMAC IN THE PAST TEN YEARS.

ICPRB IS CONTINUING TO FOCUS OTHER STUDY EFFORTS ON THE TRANSPORT OF SEDIMENT AND ASSOCIATED NUTRIENTS TO THE ESTUARY AND BAY FROM NONPOINT SOURCES SUCH AS AGRICULTURE IN THE UPPER BASIN. EROSION OF SEDIMENT AND NUTRIENTS CAN BE REDUCED FROM THE UPPER BASIN AND THE ON-SITE AND OTHER LOCAL BENEFITS ARE READILY APPARENT. HOWEVER, EFFECTS OF THESE NONPOINT SOURCE CONTROLS ON DOWNSTREAM DELIVERY OF SEDIMENT AND NUTRIENTS TO THE ESTUARY ARE STILL NOT CLEAR.

OUR STUDIES WILL PROVIDE FUTURE GUIDELINES FOR DETERMINING HOW FAR UPSTREAM AND OVER WHAT TIME PERIOD NONPOINT SOURCE CONTROLS WILL BE EFFECTIVE IN IMPROVING ESTUARY WATER QUALITY. THE RESULTS ARE VITAL TO COST-EFFECTIVE APPLICATION OF NONPOINT SOURCE POLLUTION CONTROLS FOR FURTHER CLEANUP OF THE POTOMAC ESTUARY AND CHESAPEAKE BAY.

ICPRB PLAYS A UNIQUE INTERGOVERNMENTAL ROLE IN THE POTOMAC BASIN. IT HAS PUT FEDERALISM INTO SUCCESSUFL PRACTICE FOR OVER 40 YEARS. WITHOUT FEDERAL PARTICIPATION, THERE WILL BE AN EMPTY PLACE AT THE TABLE. FEDERAL PARTICIPATION ENHANCES EFFICIENCY AND EFFECTIVENESS OF THE ESSENTIAL LOCAL-STATE-FEDERAL RELATIONSHIPS SO VITAL TO THE NATIONAL CAPITAL AND OTHER NATIONAL INTERESTS IN THE BASIN. I FEEL STRONGLY THAT THE BENEFITS TO THE FEDERAL GOVERNMENT FAR EXCEED THE COST OF THE $79,000 APPROPRIATION WHICH WE ARE REQUESTING.

THANK YOU AGAIN FOR THE OPPORTUNITY TO TESTIFY, AND NOW MR. EASTMAN AND I WILL BE HAPPY TO ANSWER YOUR QUESTIONS.

Fiscal Year 1986 Budget Justification
(October 1, 1985-September 30, 1986)

A. HISTORY:

The Interstate Commission on the Potomac River Basin (ICPRB) was created with the Potomac Basin Conservancy Compact of 1940 by the signatory bodies, i.e., the Commonwealths of Virginia and Pennsylvania, the States of Maryland and West Virginia, and the District of Columbia. The 1940 Compact was developed for the purpose of controlling pollution in the Potomac drainage area and the U.S. Congress approved it on July 11, 1940. The signatory bodies later ratified amendments to the Compact to broaden the Commission's coordination, investigation, and education responsibilities to include "development, utilization and conservation of the water and associated land resources" of the basin. The U.S. Congress approved the amendments with the passage of Public Law 91-407 on September 25, 1970. Members of the Commission are appointed by the Chief Executive (Governor or Mayor) of each signatory body according to provisions of its ratifying statue and by the President for the federal government.

B. SERVICE AREA:

The service area covers the 14,700 square miles of the Potomac drainage basin in the District of Columbia and parts of Maryland, Pennsylvania, Virginia and West Virginia, including several thousand square miles of national parks and forests and other federally-owned lands.

C. ORGANIZATION:

All ICPRB responsibilities under the Compact are vested in the Commission which is administered by the Commissioners (three plus alternates from each of the four states, the District of Columbia and the federal government) through an executive director and staff located in Rockville, Maryland. The Commissioners meet quarterly in March, June, September and December to carry out their policy direction and other responsibilities. Between quarterly meetings, this function is vested in the Executive Committee which is composed of one member from each jurisdiction and meets on the call of the Chairman.

D. WORK PROGRAM:

1. Water Supply --

Implementation of the Potomac Water Supply Coordination Agreement of July 22, 1982 for management of upper basin storage reservoirs (Bloomington Lake and Savage River Reservoir) and downstream water supply withdrawals in the Metro Washington Area through the CO-OP Section (Cooperative Water Supply Operations on the Potomac). ICPRB CO-OP has developed and will continue to refine and operate the computerized analytical programs for cooperative operations of reservoirs and withdrawals to assure water supply reliability, maintenance of streamflows to protect water quality and aquatic ecosystems, and maximization of benefits to other reservoir purposes. This has eliminated the need for additional reservoir storage in the upper Potomac basin in Maryland, Pennsylvania, Virginia or West Virginia until well after the year 2000, thus saving a minimum of an estimated $250 million as proposed in earlier plans.

2. Water Quality --

a. ICPRB's major water quality program emphasis will be to assist the states and EPA in the continuing implementation of Chesapeake Bay clean-up initiatives, coordinated by the State/EPA Executive Council (VA, PA, MD, DC and USEPA) and its Implementation Committee and Subcommittees. ICPRB's Chesapeake Bay role calls for continuation of its traditional leadership and coordination under the Potomac Basin Interstate Compact for the Potomac arm of the Bay, which is second only to the Susquehanna River as a catchment area draining to the Bay. Under current arrangements, continuation of the Potomac estuary clean-up strategy is implemented through the Potomac Strategy Committee (USEPA, DC, MD, VA, ICPRB and Metro Washington Council of Governments). ICPRB's work, which is especially relevant to the Bay as a whole, as well as the Potomac River arm is:

(1) Conduct of planning studies on sediment and nutrient transport from upper basin nonpoint sources and the effectiveness of controls for reducing nonpoint source contributions to estuary and bay pollution problems (e.g., the massive upper estuary blue-green algae bloom of 1983), and

(2) Participation with the Baltimore District, U.S. Army Corps of Engineers, in the coordination of planning and control for Hydrilla, the foreign submerged aquatic plant first identified in 1983 as a noxious weed problem of the Potomac estuary and other Bay freshwater marshlands and shoreline waters (e.g., the National Park Service's Dyke Marsh), through the Hydrilla Regional Action Committee (HYDRAC) chaired by ICPRB.

b. Development of recommended policies and procedures for minimizing instream conflicts between water supply and water quality and for enhancing fisheries and recreational benefits below the Savage River and new Bloomington reservoirs in the upper basin and downstream to the Potomac tidewater. This will continue to be achieved through the Instream Flow Committee composed of representatives from federal and state water and fisheries agencies and chaired by ICPRB.

c. Coordination of the Potomac basin surface water quality monitoring network by means of a task force of state and federal representatives, and evaluation and reporting on pollution control progress and water quality trends throughout the five-state basin.

d. Development and refinement of technical tools, such as mathematical computer models relating wastewater treatment levels to instream quality parameters, for evaluating the attainability of water quality standards and opportunities for maximizing benefits of wastewater treatment and other pollution controls, and for maintaining interstate compatibility of standards and pollution control programs.

e. Maintenance and extension of the toxic spill model for the Potomac and major tributaries as an early warning system for water supply intakes.

f. Promotion and assistance with major water-related projects and research to solve problems of interstate significance, for example, acid pollution from abandoned mines in the Potomac North Branch sub-basin. The latter includes evaluation of the changing relative influences on water quality of the uncontrolled acid drainage from the abandoned mines and the treated drainage from active mines, the development of priorities for expenditures on abandoned mine reclamation projects for the most efficient utilization of money allocated to the Potomac North Branch sub-basin in West Virginia and Western Maryland from the Federal Abandoned Mine Reclamation Fund, and the development of recommended procedures for operating Bloomington Lake which most effectively maintain water quality in the Lake and downstream in the North Branch.

3. Public Education and Information --

Publication of 9 issues each year of the Potomac Basin Reporter, the only basin-wide current event water information periodical; organization and conduct of an annual State of the Potomac public meeting and publication of reports for the lay public; continuation of summer Potomac River Watch weekly reports about water quality and recreational opportunities for use by the news media; continuation of the news media outreach program about the basin's water resources, especially the improved water quality, recreation and other values of the Potomac and its tributaries throughout the basin; and maintenance and updating of the library of Potomac basin information materials for use by technical organizations and the public and for responding to the usual 100 or more annual requests for Potomac-related educational material and information.

E. PROPOSED FISCAL YEAR 1986 BUDGET:

Table 1 shows proposed expenditures in FY 1986 by major categories along with actual and budgeted expenditures for FY 1984 and 1985. Table 2 shows proposed member state and federal appropriations and anticipated income from other sources for FY 1986 together with actual and budgeted amounts for FY 1984 and FY 1985.

Table 1

Interstate Commission on the Potomac River Basin
Proposed Expenditures for Fiscal Year 1986
(Including actual and budgeted amounts for FY 1984 and FY 1985)

Major Expenditure Categories(1)	Actual FY 1984	Budgeted FY 1985	Proposed FY 1986
Personnel Salaries and Benefits	$ 507,680	$ 543,000	$ 549,000
Rent, Office Expense, Travel, etc.	103,470	122,230	122,000
CO-OP Section Computer Equipment	11,260	38,000	3,000
Publications	24,980	23,720	32,000
Consultants & Contracts	44,800	24,000	40,000
Total Budget	$ 692,190	$ 750,950	$ 746,000
Total Staff(2)	15.4	14.9	14.9

(1) Includes expenditures of Section on Cooperative Water Supply Operations on the Potomac (CO-OP Section) organized under Article III of the Potomac Basin Compact and supported by contributions of Washington Metro Area water utilities.

(2) Includes permanent part-time employees and temporary summer technical aides.

Table 2

Interstate Commission on the Potomac River Basin
Proposed Contributions and other Projected Income for Fiscal Year 1986
(Including actual and budgeted amounts for FY 1984 and FY 1985)

Source*	Actual FY 1984(1)		Budgeted FY 1985(1)		Proposed FY 1986
Signatory States					
District of Columbia	$ 40,500		$ 41,450		$ 45,500
Maryland	55,200	(68,200)	55,200	(70,100)	78,600
MD supplemental project			25,000		
Pennsylvania	20,400		20,600		21,400
Virginia	58,470	(64,500)	58,470	(66,250)(2)	74,200(2)
VA Supplemental project	12,000				
West Virginia	27,660	(19,400)	19,600		20,300
States Subtotal	$214,230	(213,000)	$220,320	(216,000)	$240,000
Direct U.S. Appropriation	68,000		70,000		79,000
USEPA Annual Program Grant under Section 106 Fed. Clean Water Act	171,000		160,000		160,000
CO-OP Contribution from Water Utilities(3)	154,040		170,000		150,000
Other Sources (Spec. Projects, Interest, Pub. Sales, etc.)	58,450		110,000		90,000
Carryover from Previous Year	119,630(4)		87,750		67,100
TOTAL	$785,350		$818,070		$786,100

*The Congressionally approved interstate compact establishing the Commission specifies that it shall be financed "by appropriations from the signatory bodies and the United States", with the pro rata contributions to be "based on such factors as population; the amount of industrial and domestic pollution; and a flat service charge." The formula for state contributions includes a flat service charge of $15,000 with 3/4 of the remainder prorated by the 1980 census population in the basin and 1/4 by major industrial and municipal point source pollution. The fair share contribution of the United States has been agreed to equal the largest of the state contributions due to the impact of the National Capital and the federal lands and other interests in the basin.

(1) Amounts in parentheses are signatory state shares according to formula as compared with actual amounts appropriated.

(2) Virginia's FY 1985 and 1986 biennial appropriations included only $58,470 for each year. A $23,510 supplemental to make up Virginia deficiency for FY 1985 and FY 1986 is being requested.

(3) Washington Suburban Sanitary Commission (MD), Fairfax County Water Authority (VA), and Dept. of Public Works (DC).

(4) Includes approximately $42,500 transferred from the Potomac Basin Advisory Committee dissolved by action of the Governors of the basin states and the Mayor of the District of Columbia in 1982.

Sept. 1984

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN
SUMMARY OF ACCOMPLISHMENTS
Fiscal Year 1984 (Oct. 1, 1983-Sept. 30, 1984

Water Quality, Monitoring Evaluation and Assistance

Preliminary analysis of potential use of readily accessible dissolved oxygen, temperature and flow data as a water quality management tool has been completed. Correlations between flow and dissolved oxygen were developed and standard errors from the regression were calculated. Standardized errors from individual observations, when large, indicate potential problems in the stream. The outliers produced from the analysis are being compared with effluent discharge data for the periods in question. The initial analysis using various transformations to get the best fit was done for an area on the Potomac North Branch below Cumberland. Data from the Shenandoah and Monocacy Rivers were also used to determine the feasibility of this type of model which utilizes available data and a simple statistical method to determine unexpected changes in water quality.

Routine activities in Water Quality Monitoring Network Coordination and Evaluation have continued, highlighted by the publication of the 1982-83 Baseline Water Quality Monitoring Network report.1/

In addition, ICPRB took a lead role in alerting Basin residents and officials to the problems which are posed by Hydrilla, an exotic water weed (Submerged Aquatic Vegetation or SAV). Hydrilla has grown out of control in the Potomac Tidewater at Dyke Marsh below Alexandria, Virginia, curtailing all recreational uses in that area. The fear that it may spread uncontrollably and become the next major environmental crisis throughout the Potomac River and Chesapeake Bay systems, prompted the National Park Service (NPS), George Washington Memorial Parkway, to request ICPRB to set up a regional group to assess the problem and recommend management and control strategies. This resulted in the formation and coordination of the Hydrilla Regional Action Committee or HYDRAC. To date, members include federal, state, local, public and private agencies, and academic community organizations representing 7 states, including DC, MD, VA and Delaware. HYDRAC serves an information exchange/awareness function and will provide expertise and advice on management/feasibility alternatives and possible funding sources for control. As a result of HYDRAC activities the Corps of Engineers Baltimore District has received funds to carry out a Hydrilla research and demonstration program in the Potomac Tidewater in 1984 and more extensive control operations in subsequent years. Also Metro Washington Council of Governments started publishing a periodic Hydrilla newsletter in September 1984. Jim Rasin serves as chairman of HYDRAC, organizing meetings, distributing information, locating expertise, and formulating strategies for control.

Planning Assistance and Coordination

The lion's share of Technical Services Unit (TSU) effort in the area of planning assistance and coordination has been devoted to developing the basis for strategies for control of Non-Point Source nutrient contributions to the Potomac Estuary and Chesapeake Bay. A coordinated research project was initiated with the U.S. Geological Survey (USGS), Reston. The purpose of this project is to determine whether multivariate data analysis can be used successfully to estimate upstream nutrient concentrations from downstream nutrient sampling. USGS computer facilities, statistical packages, and data sets have been used for this effort. As a result of this research the following have been completed:

The ICPRB toxic spill model was adapted to generate lagged travel time from upstream stations to Chain Bridge in the tidewater at the fall line.

Regressions were run using the in-house MINITAB package which show that correlations are greatly improved by using lagged flows and by accounting for seasonal trends in the data.

This methodology can be used to reconstruct water quality records at Chain Bridge (and other stations) with much better correlations than the traditional at-site techniques.

A proposal was submitted to the EPA Chesapeake Bay Program to continue the work and expand its application to the Susquehanna and James River Basins.

A working paper was prepared summarizing the work to date.2/

Because of the availability of excellent sediment data and the strong relationship of sediment with nutrient transport, an in depth analysis has been made of the transport and storage of sediment in the Potomac Basin. A better understanding of sediment transport will help to estimate over what time scale there will be measurable improvements to the Potomac Estuary water quality from upstream nonpoint source controls. A working paper was prepared and revised several times.3/ This paper includes statistical analysis of historical data, literature review of sediment transport research and suggested management implications of this work. A second paper 'The Transport and Storage of Sediment in the Potomac River Basin', was presented at the special session on the sediment storage at the spring meeting of the American Geophysical Union (AGU).4/

Field work has been initiated in the Little Pipe and Sams Creek areas of the Monocacy River basin. Cross sections have been monumented so that the seasonal and long-term movement of sediment in storage can be monitored. Stream channels have been examined for different types of channel storage and sources of sediment entering the system. Inventories of sediment in storage are in progress--pending particle size analysis of sediment samples. The results of recent field work and future analysis will be presented at the Winter AGU meeting.

The results of our work were presented to the MD-Office of Environmental Programs in order to clarify our conclusions and suggest future monitoring needs.

Since November 1983, most of Carlton Haywood's time has been spent at the Metro Washington Council of Governments (COG) assisting in a study of the causes of the 1983 Potomac algae bloom. At COG, he was responsible for the preparation of the input water quality data files for the 1980 and 1983 Potomac Eutrophication Model (PEM)runs (the 1980 model run is considered an important component of the algae bloom study). Preparation of the 1983 PEM model run has culminating in a written report released by COG. Since preparation of the model input files he has continued helping COG in the analysis of the 1980 and 1983 runs.

The District of Columbia Dept. of Environmental Services funded an investigation of the relationship of water temperature and river flow with dissolved oxygen in the Upper Potomac Estuary, and of the implications of this relationship for operating wastewater nitrification processes. Results of this work include a methodology for selecting the minimum period of the year when nitrification is required to assure maintaining minimum dissolved oxygen (DO) and ammonia (NH3) water quality standards.5/

Improvements continued to be made to the Toxic Spill model for the main stem Potomac River and major tributaries.6/ The development of a wave travel model was begun. When used in conjunction with the Toxic Spill model, the wave model will provide guidance in scheduling flushing releases from Bloomington, Savage and eventually Seneca Reservoirs in order to decrease the time a toxic plume may be near the Washington area water utility river intakes. The spill model has been extensively demonstrated to state and local agencies. The results of simulations of hypothetical spills indicate that serious disruptions of water supplies are possible. TSU staff has initiated development of plans to deal with spills so as to minimize their impacts.

The Instream Flow Committee, organized at the request of the Maryland Dept. of Natural Resources (DNR), has had several meetings this fiscal year. The Committee's report and recommendations on operation of the Savage River Dam were transmitted to DNR, and subsequently published by the Water Resources Administration. The recommendations have been implemented and have already resulted in a substantial improvement in brook trout habitat in the Savage River downstream of the Savage Reservoir.

Jim Rasin, of the TSU, has been particularly active in the Washington Area Waterfront Action Group (WAWAG). He served as Secretary/Treasurer of the Environmental Quality Task Group, and as chairperson of the WAWAG Fishing Committee. This entailed organizing and coordinating the fourth annual Fishing Clinic and Fishing Derby June 2-8, 1984. The derby was a great success.

A framework has been developed for evaluating the economic benefits and costs of various alternatives with regard to the maintenance, repair and renewal of water and sewer infrastructure.

The Maryland Power Plant Siting Program funded staff research to describe the potential impacts on system reliability of future consumptive users.7/ Future consumptive users (in excess of 1 mgd, or present users who expand use by more than 1 mgd) may be required to provide make-up storage for low flow periods. The work done by ICPRB determined the minimum volume of storage that must be provided in order to offset the increased risk imposed upon current users by future consumptive uses. The methodology developed by ICPRB has been incorporated in a draft regulation within Maryland DNR, and may become the basis for future permitting on the Potomac. If implemented, the regulation will help assure the reliability of the water supply system on the Potomac, while minimizing the cost of supply for future consumptive users on the Potomac.

Utilizing chance-constrained linear programming, the 1983 drought exercise was reanalyzed to explicitly derive the trade-off between the reliability of satisfying water supply demand, and meeting the environmental flowby requirements at both Great Falls, and Little Falls. This reanalysis confirmed the operating preference for achieving the highest flowby reliability consistent with maximal water supply reliability, articulated by the Director of Technical Services. This work was successfully presented in July 1984 at the American Society of Civil Engineers Water Resources Planning and Management specialty conference entitled "Urban Water '84", in Baltimore.8/

Additional work on reservoir management has been initiated as part of the Maryland DNR Chesapeake Bay initiatives, to study the potential for augmenting freshwater flows to Chesapeake Bay by modifying reservoir operations on tributary rivers. As part of this work, a one dimensional finite-difference model of salinity has been acquired and installed on ICPRB's computer system, enabling modifications of reservoir operating rules to be related to changes in salinity--both temporally and spatially--in Chesapeake Bay.

Using the MINITAB statistical package recently acquired by ICPRB, Box-Jenkins time series analysis has been used to produce hydrological forecasts for drought conditions, including the drought exercise of 1984. This work is part of a larger project to compare streamflow forecasts produced statistically using time-series analysis, with those produced using the conceptual hydrological modelling approach of the National Weather Service River Forecast System (NWSRFS). These forecasts will be useful for forecasting flow related water quality in those areas where the NWSRFS has not yet been calibrated.

Substantial progress has been made in the area of acid mine drainage control. The NWSRFS has been run for the Potomac North Branch basin, and sensitivity analysis reveals it is possible to link decisions on the quantity of water to be released from Bloomington in the summer for water quality control to the value of the soil moisture parameters in the model in late spring. Meetings with the Baltimore District Corps of Engineers (COE) have confirmed the utility of this information. In addition, the COE Westex water quality model for Bloomington has been installed and run to determine the possibilities for pH and temperature control downstream of the reservoir. This model has made it possible to identify the linkages between water quality and water supply releases from Bloomington. The model will be used next spring and summer to formalize the coordination of releases between ICPRB CO-OP and the COE.

In addition, A project outline was developed with the staff of local colleges in West Virginia and western Maryland to gage public opinion on the subject of water quality with respect to acid mine drainage in the North Branch of the Potomac. A lecture on the causes, effects, and possible abatement methods of acid mine drainage was presented at the Potomac State College (Keyser, WV) Earth Week seminar series.

Publications

The goal for the newsletter, ten issues per year, was met. Significant coverage in the REPORTER included supporting information on the Chesapeake Bay Conference (December 7,8,9 of 1983), Potomac River safety measures, hydrilla, sludge disposal, and algae studies. A cleanup of the REPORTER mailing list resulted in over 900 changes. Our current newsletter circulation is 8,100.

The Potomac in Washington was published in November, 1983.9/ A 16-page general publication, it focuses on water quality improvements in the metropolitan Washington area, and follows up on the 1982 Fall Public Meeting of the same title. The new publication was promoted in the January 1984 issue.

The Biennial Water Quality Report '82-'83 was published in September, using a new format developed following discussions with both staff and outside readers. The objective of the new format is a more readable publication with lower production costs (20-30%), at a better unit price ($1.50 instead of $4.50). The report is based on two-year water quality data and will focus on the status (as opposed to trend evaluation) that such data affords. A trend evaluation report will be done approximately every five years or so.

Research was initiated for The Potomac and the Chesapeake, which is scheduled for publication in April, 1985 (timed to coincide with ICPRB Public Meeting of the same title in May).

The Commission sold a total of 1,271 publications as of August 22, 1984. The bulk of the sales was for the Potomac/C&O Canal Maps (44%), Metro Washington Poster/Maps (18%), and The Potomac in Washington (35%). All other publications comprised the balance of 3%.

Projects

ICPRB supported the Chesapeake Bay Conference not only through its coverage in the REPORTER but through planning and promotion assistance throughout the fall. A 15-minute video tape, "The Potomac in Washington," was produced in cooperation with the D.C. Dept. of Environmental Services, and was shown throughout the conference. The tape has been circulated.

Organizational and promotional support has been extended to the Washington Area Waterfront Action Group (WAWAG). WAWAG is a non-profit, volunteer, and non-lobbying organization committed to improving water quality of the Potomac and the Anacostia and their shorelines. The Commission's support has been given with the objective of strengthening WAWAG's capability as a regional educational tool and mechanism for public dialogue on water quality/waterfront issues. Organizational and promotional efforts have resulted in a membership of over 100 people, a successful 4th annual fishing clinic and derby (aimed at educating urban youth about fishing and water quality benefits), a promotional brochure, two issues of a newsletter, CAPITAL WATERFRONTS, two public forums, and a five-day go-see waterfronts trip by schooner along the east coast.

Planning was initiated for the 1985 Public Meeting, "The Potomac and the Chesapeake, with meetings of interested parties in Richmond and tidewater Virginia. The public meeting is tentatively scheduled for May, 1985 in Westmoreland County, VA. The general focus will be the dynamics of the estuary and implications for improving the Chesapeake Bay.

The North Branch Potomac Public Opinion Survey was initiated in July. The survey was suggested as an educational project by those participating in a spring 1984 meeting at Potomac State College. The survey will examine public perceptions in the North Branch Potomac area relative to water resource management concerns, including, but not limited to, acid mine drainage. The results should aid the Commission in designing educational efforts for the upper basin, and should be helpful to water resource managers in the region. It is anticipated that consultants from the University of Maryland Survey Research Center will participate along with interested individuals and organizations, institutions in the upper basin.

The 8th annual River Watch program (initiated in 1977) ran from June through September. We increased our river watchers to 18, covering the river from Flintstone, MD (above Hancock) down to Point Lookout, MD and Smith Point, VA. Nine radio stations broadcast the 60-second weekly message on river conditions.

OTHER

Unit staff participated in a 1984 Boat Show exhibit in the District of Columbia as well as several festivals, as is done every summer. The staff responded to an unusually large number of inquiries during the year, especially on Hydrilla as well as concern over a possible return in 1984 of the algal blooms that occurred in the upper estuary during the summer and fall of 1983.

1/Potomac River Basin Water Quality 1982-83, Rasin, V. James and Keith M. Brooks, ICPRB, Sept. 1984.

2/Multivariate Regression Analysis of Nutrient/Flow Relationships in the Potomac River, Shoemaker, Leslie L., Roland C. Steiner and James A. Smith, ICPRB Working Paper, May 1984.

3/The Role of Sediment in Nonpoint Pollution in the Potomac River Basin, Smith, James A. and Leslie L. Shoemaker, ICPRB Working Paper, April 1984.

4/Transport and Storage of Sediment in the Potomac River Basin, Smith, J.A., L.L. Shoemaker, and A.J. Miller AGU Spring Meeting, Cincinnati, OH., May, 1984.

5/A Model of Temperature, Flow, and Dissolved Oxygen in the Upper Potomac Estuary, Haywood, H. Carlton, ICPRB, for the DC Dept. of Environmental Services, Sept. 1984.

6/Emergency Planning for Toxic Spills, Steiner, R.C., B.A. Spielmann and D.P. Sheer, AWWA Chesapeake Section Annual Meeting, Baltimore, MD, August 1984.

7/Determining Augmentation Requirements for Future Consumptive Users in the Potomac River Basin, Sheer, Daniel P. and Stuart Schwartz, ICPRB, for the MD Power Plant Siting Program, Feb. 1984

8/Real-Time Decisions for Reservoirs Operation in a Risky Environment, Schwartz, Stuart, presentation at "Urban Water '84", ASCE Water Resources Specialty Conf., May 28-31, 1984.

9/The Potomac in Washington, Bandler, Beverly, ICPRB Gen. Pub. 83-1, Nov. 1983.

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN
6110 Executive Blvd., Suite 300
Rockville, MD 20852
(301) 984-1908

Staff Positions at Sept. 1, 1984

EXECUTIVE DIRECTOR, Paul W. Eastman, P.E.

GENERAL COUNSEL, Henry P. Stetina

TECHNICAL SERVICES

TECHNICAL DIRECTOR, Daniel P. Sheer, Ph.D., P.E.

SYSTEMS PLANNING ENGINEER, Roland C. Steiner, Ph.D., P.E

ENVIRONMENTAL ANALYST, Keith M. Brooks

ENVIRONMENTAL SCIENTIST, H. Carlton Haywood

AQUATIC BIOLOGIST, V. James Rasin

ENVIRONMENTAL ENGINEER, Leslie L. Shoemaker

WATER RESOURCES ANALYST, Stuart S. Schwartz

PUBLIC EDUCATION AND INFORMATION SERVICES

PUBLIC EDUCATION SPECIALIST, Beverly Bandler

PUBLIC INFORMATION OFFICER, Curtis Dalpra

EDITORIAL SECRETARY, Joan Schoshinski

ADMINISTRATION AND SUPPORT SERVICES

ADMINISTRATIVE OFFICER, Mary-Ellen Webster

BOOKKEEPING ASSISTANT,

SECRETARY, Sandra S. Sayers

SECRETARY, Patricia L. Rosenquist

COOPERATIVE WATER SUPPLY OPERATIONS (CO-OP) SECTION

SECTION DIRECTOR, Daniel P. Sheer, Ph.D, P.E.

HYDROLOGIST, James A. Smith, Ph.D.

ICPRB CO-OP
Annual Accomplishments Report
Fiscal Year 1984

1984 marked the second year of CO-OP operation. Activities closely followed the program plan and budget, with adjustments as notes below:

I. Operations

A. Operational Forecasting

Routine water supply forecasts were issued from May through September. The May forecast stated that the probability of using Bloomington water supply storage during the summer or fall was negligible. Water supply proved not to be an issue during the summer of 1984.

B. Drought Rehearsal

The 1984 Washington Metropolitan Area Drought Exercise was conducted during the last two weeks of August. The principal operating parameters included hypothetically low flows in the Potomac, artificially low starting storages in water supply reservoirs (including Little Seneca for the first time), and real demands. As part of this year's exercise, the demand forecasting model was recalibrated on more recent water use data, and computer programs were written and tested to automate the daily scheduling of releases and withdrawals from all sources. The last few days of the exercise were conducted from the American Water Works Association conference in Baltimore. The coincidence of the conference with the Drought Exercise provided a wider local audience with a first hand view of how lines of communication would be opened and technical programs would be used in the event of an actual drought.

II. Formalizing Existing Procedures

A. Performance Analysis for NWSRFS

Version 5 of the National Weather Service River Forecast System (NWSRFS) was released in August of 1984. CO-OP performed coding for the long-range forecast component of NWSRFS and carried out extensive testing of NWSRFS. This is detailed in Section III.A, below. In addition to improving operational capabilities, these changes will make it possible to evaluate the performance of the NWSRFS using historical data.

B. Training

CO-OP has continued to instruct utility personnel in operation and maintenance of CO-OP water supply programs. Utility staff have made useful suggestions for improving the format and substance of CO-OP water supply forecasts; these suggestions have been incorporated. The major opportunity for technical exchange with utility staff during the year was the drought exercise carried out during the last two months of August.

III. Improving Operational Capabilities

A. Install NWSRFS on the CO-OP Computer

Significant progress was made in transferring water supply forecasting capabilities to CO-OP machines. The major problem encountered is the excessive computational time required for the NWS forecast programs. These problems have largely been overcome by recalibrating the Sacramento model using a breakdown of the Potomac River basin into four sub-basins rather than 24. The four-basin model does not suffer from a serious drop in forecast accuracy from the established model. The major remaining obstacle to transferring forecast operations to CO-OP machines is developing procedures and protocol for obtaining operational NWS precipitation data.

The District of Columbia has agreed to allow CO-OP to use its new VAX 11-730 computer as soon as it becomes operational. This was expected this spring, but late deliveries and operational snags have caused delays. The machine should come on line about the beginning of FY 1985.

B. Distribution System Analysis for use in Scheduling Hourly Withdrawals

Analysis of time of withdrawals from last years drought rehearsal, coupled with time of travel information, indicate that the staggering of river withdrawals along the Potomac will effectively offset the hourly withdrawal peaks of the utilities. Analysis of the PEPCO rate structure indicates that the rates are so constructed that time of day scheduling is likely to be of little value to the utilities because of the offsetting demand charge. Therefore, distribution system analysis was not pursued.

C. Improving the Use of Weather Forecasts

Because of the need to update the NWSRFS in order to use better weather forecasts, efforts in this area were redirected to improving the NWSRFS (see E. below)

D. Analysis to Reduce Flooding below local Reservoirs

The heavy rains and high flows of the summer of 1984 brought home the importance of keying reservoir operations to forecasts during wet summers. CO-OP analyzed the potential for continuing hydropower operations at the Occoquan, and for flood control drawdowns at the Rocky Gorge reservoir.

E. NWSRFS Improvements (unscheduled)

During the final quarter of the year major extensions to the ESP coding were performed. These enhancements, which resulted from field testing at other NWS River Forecast Centers, included 1) addition of the capability to "weight" different historical years, 2) capability to perform ESP analyses on model soil moisture storages, 3) capability to adjust "conditional simulation" forecasts for systematic calibration error, and 4) capability to compare "conditional simulation" forecasts for subsets of the historical record, and 5) improved display of forecast information. These coding changes were carried out and tested by CO-OP. All of the enhancements may prove useful for CO-OP Washington Metropolitan Area forecasts.

CO-OP has made a major effort to extend its historical precipitation data base. Long-range forecasts are currently based on precipitation data covering the period 1949-1974. During the year CO-OP has expanded its precipitation data base to 1980. By May 1985 the new precipitation data will be transferred to formats required for the long-range forecast programs.

F. Taste and Odor Problems (unscheduled)

A well attended meeting of interested water utility personnel was called to discuss the problem of taste and odor in drinking water during the winter. Antecedent weather conditions were reviewed and revealed snow and rainfall during a two-week period of sub-freezing temperatures followed by an abrupt thaw. The dialogue was helpful to all concerned and the idea of future meetings on operational problems was agreeable.

IV. Miscellaneous (unscheduled)

A share of the host services was provided to a group of British water authority personnel who attended seminars and toured local water and waste water facilities. Portions of the work of the Commission were demonstrated to the visitors during their stay in the Washington, D.C./Baltimore area. Involvement with the British visit resulted in a valuable interchange of ideas on subjects of mutual interest.

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, MARCH 5, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2 p.m. in room SD-124, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Stennis, and Sasser.

TENNESSEE VALLEY AUTHORITY

OPENING REMARKS

Chairman HATFIELD. The committee will please come to order.

This afternoon we resume the hearings on the fiscal year 1986 budget request, receiving today testimony from the Tennessee Valley Authority.

The subcommittee extends a warm welcome to Mr. Charles H. Dean, Jr., chairman of the board of the Tennessee Valley Authority; and directors Mr. Richard M. Freeman and Mr. John B. Waters.

Gentlemen, it is a pleasure to have you today, as always. We extend a special welcome to Mr. Waters, who is appearing before this committee for the first time.

Mr. WATERS. Thank you.

Chairman HATFIELD. And again, welcome to each one of you and to your staff who accompanies you here today. You may proceed with your statement by summarizing or by highlighting as you wish after we have an opportunity to hear from Senator Sasser.

TVA ROLE IN THE NATION AND THE TENNESSEE VALLEY REGION

Senator SASSER. Mr. Chairman, I thank you very much.

As the chairman knows and as those know who have watched this committee over the years that I have served on it, I have never hesitated to speak out on issues that affect the Tennessee Valley Authority. In fact, on occasion, I have been critical of the TVA when I felt that they could have done some things better.

But I have always supported the historical role for which the Tennessee Valley Authority was created over 50 years ago, and that is, a role of regional economic development. This agency came into being, as you know, Mr. Chairman, as a result of the deprivation in the Tennessee Valley area and was an effort to try to bring this section of the country into the economic mainstream of the United States.

This role has not been fulfilled totally as yet. We still, in the Tennessee Valley area, have a long way to go, I think, before we are in the economic mainstream of this country.

The role of the Tennessee Valley Authority today is threatened, as it has not been threatened, in its 50-year history. It is confronted with a budget that simply emasculates this agency. The budget cuts are excessive. These cuts, if they are adopted, affects how this agency will perform the historical role for which it was created by statute. As our chairman knows, there is a 71-percent budget cut recommended from the Office of Management and Budget for the Tennessee Valley Authority.

This comes on top of a 40-percent budget cut that has been enacted over the past 4 years.

So, Mr. Chairman, as we begin this hearing today and in the company of my distinguished colleague of many, many years, Senator Stennis, I wanted to make a plea for equity and fairness on behalf of the Tennessee Valley Authority. It is a vital resource to my native State of Tennessee, and, indeed, a vital resource to the Tennessee Valley area, and I think and believe very firmly a vital resource to this Nation.

I might say, Mr. Chairman, that our region in Tennessee, and the Tennessee Valley area in general, has not received the benefits that other areas of the country have from the tax cut that was enacted in 1981. Our region continues to lag behind the recovery, which appears to be benefitting the rest of our Nation.

Unemployment in the Tennessee Valley region is still substantially higher than the rest of the country.

So I wanted to call the attention of the committee to these problems in our region, and I wanted to reinforce the vital role that the TVA plays in a variety of areas that are not just important to Tennessee and not just important to the Tennessee Valley region, but as our chairman knows, are also important to the country.

Thank you, Mr. Chairman.

Chairman HATFIELD. Thank you, Senator Sasser.

Senator Stennis, do you have an opening statement you wish to make?

Senator STENNIS. Well, Mr. Chairman, I thank you. I do want to make a statement, not an extensive one though. I will use my time a little later. I hope that is agreeable with the membership.

Chairman HATFIELD. Any time you wish.

All right, Mr. Dean, we would be happy to hear you at this time.

STATEMENT OF CHARLES H. DEAN, JR., CHAIRMAN OF THE BOARD, TENNESSEE VALLEY AUTHORITY

ACCOMPANIED BY:
RICHARD M. FREEMAN, DIRECTOR
JOHN B. WATERS, DIRECTOR
WILLIAM F. WILLIS, GENERAL MANAGER
HERBERT S. SANGER, JR., GENERAL COUNSEL
BRUCE D. LONG, CHIEF, BUDGET STAFF

BUDGET REQUEST FOR 1986

Mr. DEAN. Mr. Chairman, if you don't mind, I will outline the President's budget request for TVA of $38.6 million for the fiscal year 1986. The budget program provides for reduced levels of activities.

In fiscal 1986, the administration requests $26 million for natural resources programs to aid and fund the following activities: The administration proposes funding for dam safety modification of $4.5 million. The request for reservoir system operations is $18.4 million, and, contingent upon approval of legislation providing new statutory authority, there is an additional proposal for user fees totalling $1,250,000 to fund navigation operations.

For resource management and development support for 1986, the request is $2 million.

The administration requests $10 million for the basic fertilizer laboratory research in 1986.

We would like to mention a few things about our power program which are not financed with appropriations. We will have Watts Bar and Bellefonte nuclear plants in commercial operation by 1990, and our generating capacity should adequately support the high economic growth expected under the medium and low power load forecasts through the nineties. With a higher forecast, we will need some additional peaking capacity by 1994.

Senator SASSER. Mr. Chairman, if I could interrupt to make a suggestion, I have had the opportunity to read the statement that is being presented by TVA, a statement approved by OMB, and frankly, Mr. Chairman, OMB's statement is almost irrelevant, in my judgment, to the task we have before the committee.

So, I would like to recommend that Mr. Dean be allowed to insert the OMB statement in the record and then go forward and tell this committee the exact impact that the OMB request would have on the current, ongoing programs of TVA, if that meets with the approval of the chairman.

Chairman HATFIELD. I appreciate the suggestion from the Senator from Tennessee. I think if we could, though, I would like to have Mr. Dean complete everything he wishes to say at this point in his formal presentation in the context which he has planned. Then he can highlight as he wishes; we will put the full statement in the record, including the explanation of OMB or whatever other material he wishes to have included in the record.

Mr. **Dean**. The rest of this material, Senator, relates primarily to the status of our power program. I can go over that or insert it in the record as you see fit.

Chairman **Hatfield**. Again, you summarize your testimony as you wish, Mr. Dean. Hearings are called for the witnesses to present material that they have prepared. We have asked for and received copies of that material in advance of the hearing. But in the hearing process, we want you to have the total liberty to make your presentation as you choose. We have never restricted any witness to any particular format. We are always under the constraint of time as you know. We do have questions we want to ask. So, within that context, we would ask you to highlight or summarize as you wish.

Mr. **Dean**. I have completed my summary of the budget proposed by the administration.

[The statement follows:]

STATEMENT OF C.H. DEAN, JR., CHAIRMAN, TENNESSEE VALLEY AUTHORITY

Mr. Chairman, I am here to outline the President's budget request for TVA of $38.6 million for fiscal year 1986. This year's budget program provides for sharply reduced levels of activities.

In fiscal year 1986 the administration requests $26 million for natural resources programs to fund the following activities:

> The administration proposes appropriated funding for dam safety modifications for 1986 of $4.5 million.
>
> The request for 1986 for reservoir system operations is $18.4 million. In addition, contingent upon approval of legislation providing new statutory authority, user fees totaling $1,250,000 are proposed to fund navigation operations in 1986.
>
> Resource management and development support activities in 1986 will continue TVA's work producing maps of the valley region, as a part of the USGS National Mapping Program, and activities that ensure TVA compliance with Federal and State management regulations. In 1986 the request for this program is $2 million.

The administration requests $10 million for basic fertilizer laboratory research in 1986.

We would now like to inform the subcommittee about our power program which, of course, is not financed with appropriations. With the completion of the Watts Bar and Bellefonte nuclear plants (Watts Bar 1985–87 and Bellefonte 1988–90), TVA's generating capacity should adequately support through the 1990's the economic growth expected under the medium- and low-load forecasts. For the high-load forecast, some additional peaking capacity may be needed in 1994, and some additional base load capacity in the 1996–97 timeframe. Based upon these forecasts, estimates of the cost of other capacity options, and an analysis of the cost of maintaining deferred nuclear units in a status available for restart, a decision was made on August 29, 1984, to cancel the Hartsville nuclear plant A and the Yellow Creek nuclear plant.

TVA has several power supply options which today appear less costly than construction of new conventional central generating stations. Conservation, solar, and load management programs in the TVA region show potential for reducing electricity demand by 11.2 billion kilowatt-hours from 1984 through 2000, more than 10 percent of TVA's power sales in 1984.

TVA's existing coal-fired plants, with appropriate maintenance, will continue to be reliable sources of power supply for many years.

Improvements and innovations made as a result of TVA's research and development program are another avenue for avoiding high-cost conventional generating stations. In addition to projects designed to improve conservation, solar, load management, and existing power generation technologies, TVA is preparing, in cooperation with other parties, to build and test a demonstration scale fluidized-bed combustion plant which shows promise of being less expensive in meeting emission control standards than conventional coal-fired generating stations with scrubbers. This technology will allow the use of higher sulfur coals.

Finally, TVA is continually implementing management efficiencies designed to keep operating costs at the lowest level possible in order to provide a reliable supply of power at the lowest feasible rates, with a sensitivity to the environment.

We will be happy to answer any questions the subcommittee members might have.

BUDGET HISTORY

Mr. DEAN. Now, in response to Senator Sasser, I would like to highlight our request to OMB and submit a more complete statement for the record.

What you see here is a trend chart which shows the status of our budget from 1980 through 1986 to give the committee some feel for the situation that we find ourselves in at this point.

Obviously, 1986 has yet to be determined, but it shows the 1986 proposed in relation to prior years. We show two lines there. One is current dollars and one is 1980 dollars. Our budget has declined in current dollars from $162 million in 1980 to $130 million in 1985.

I would like to show you another chart, which is a pie chart that shows how we divide our funds up at this time. A lot of these activities are national in scope. About a third of our budget is tied into the National Fertilizer Development Center, which is the only center in the country for fertilizer research.

About one-fourth of our budget supports the management of the Tennessee River system. These are the types of activities that the Corps of Engineers carries out normally in other parts of the country.

About 5 percent of our budget supports Land Between the Lakes, a national laboratory which combines recreation, environmental education, and land stewardship and was visited by 2 million people in 1984 from all 50 States.

About a third of our budget supports natural resource and economic development activities, and much of the knowledge and expertise developed by TVA in carrying out these functions are shared with others in other parts of the country and overseas.

We have another pie chart which compares the 1985 budget with the budget for 1986 proposed by the administration.

It speaks for itself. It shows the items which remain under the proposal that we are now dealing with. I would now like to talk to you about some of the programs that we are now conducting which seem to have very considerable promise for the Nation.

WATER RESOURCES

For instance, we are dealing with some water quality problems that we find are rather serious. We have started a study of ground water, for instance, because we find that 60 percent of our people are drinking water out of wells, and that there are lots of things happening to ground water which concern us.

We are working with State and Federal agencies to demonstrate methods of solving water-related problems of all kinds. One of them is the low level of dissolved oxygen which we find in parts of our reservoirs.

Senator SASSER. Mr. Dean, could you pull those microphones a little closer? I am having a little difficulty hearing you.

Mr. DEAN. I am sorry.

Senator SASSER. That is much better. Thank you.

Mr. DEAN. For these and other water quality programs, we have requested $7 million.

For programs in land and forest and environmental energy education we have requested $5.7 million.

LAND AND FOREST RESOURCES

Our forest program activities focus on a resource that constitutes nearly 60 percent of the valley land base and supports the $3 billion forest products industry. It is the region's second largest manufacturing employer.

Our environmental energy education activities are designed to develop an awareness of the interrelationship of valley resources by its residents. As part of resource management and development support, TVA has requested $500,000 to continue acidic precipitation research that would concentrate on the examination of impacts in southern Blue Ridge Province, an area identified as potentially vulnerable.

Our Land Between the Lakes is a 170,000-acre area lying between Kentucky Lake and Barkley Lake in western Kentucky and Tennessee. This area has been developed by TVA as a demonstration to show how the Nation's land, water, and wildlife can be managed in such a way as to provide quality education and recreational opportunities for people from across the Nation. We requested about $7.6 million for LBL.

ECONOMIC AND COMMUNITY DEVELOPMENT

The Economic Resource Program assists local development efforts and local investment by helping communities obtain a more in-depth understanding of their local economy, the resources at their disposal, and the most practical ways of creating new jobs. TVA requested $15.3 million to continue this work in 1986.

The TVA Community Resources Program places major emphasis on developing local leadership, helping build self-sustaining, community-based organizations, and developing and implementing economic growth strategies reflective of local values. TVA requested $6.7 million to continue these activities.

AGRICULTURAL PROGRAMS

Valley agriculture and agriculturally related industries play an extremely important part in the region's economy, employing up to one-third of the work force and generating economic activity of more than $7.5 billion. The Agricultural Resources Development Program develops and introduces new technology to improve efficiency in agricultural production, increase returns for crop and livestock enterprises, and protect the soil and the environment. TVA requested $5.7 million for agricultural resources development.

FERTILIZER RESEARCH

Fertilizer is one of the most critical purchases a farmer makes. About 40 percent of U.S. crop production is a direct result of the use of fertilizers. With fertilizers, farmers can meet the Nation's food and fiber needs on fewer acres and still export $40 billion worth of agricultural products annually.

TVA has the Nation's only Research and Development Program for dealing with a spectrum of problems involving fertilizer production and use.

The purpose of TVA's Fertilizer Introduction Program is to develop improved fertilizers and processes in prototype units and to expedite the acceptance of the new technology so that the benefits of research and development are quickly transferred into the Nation's economy.

One of the Nation's greatest unused resources is low-grade hardwood. TVA has underway a program of research to convert these hardwoods into ethanol. Our research, we believe, will lead to a process which will yield 70 gallons of ethanol per ton of hardwood, a conversion rate which will result in an economically feasible project.

As we noted earlier, TVA's activities are strongly national in character. We believe the record supports our view that citizens across the country benefit from much of what the TVA undertakes in both its appropriated and power programs. We are proud of the many practical, down-to-earth answers to resource development and management problems that TVA has perfected over the years.

This concludes my summary of the information that we have supplied to the Office of Management and Budget.

[The information referred to follows:]

SUMMARY OF ADDITIONAL MATERIAL

Mr. Chairman, I am pleased to provide a summary of this additional material.

If I may be permitted an introductory comment, I would first like to place in perspective the administration's request for fiscal year 1986.

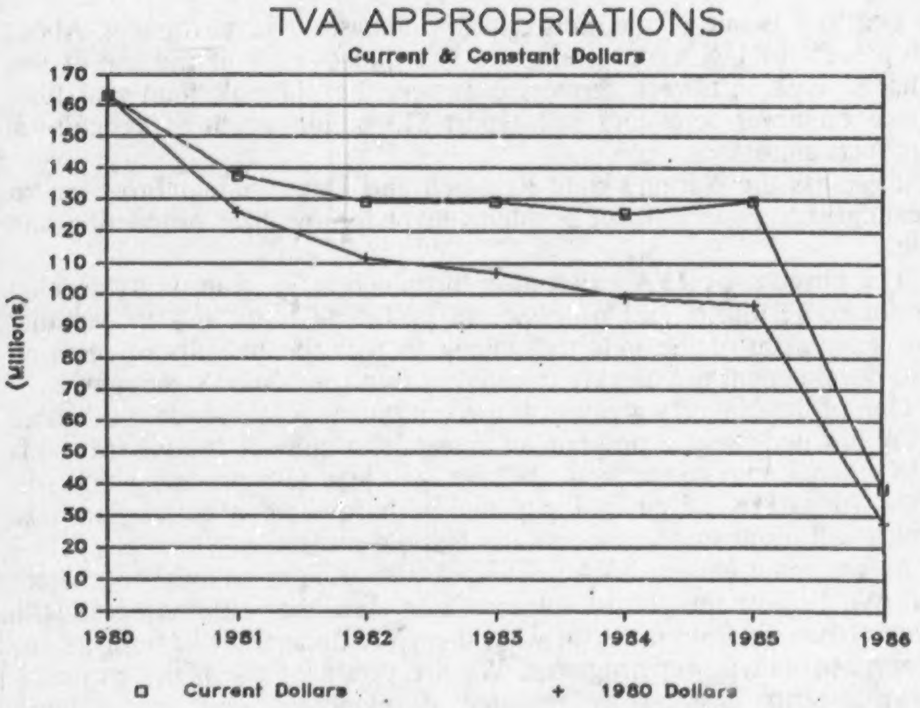
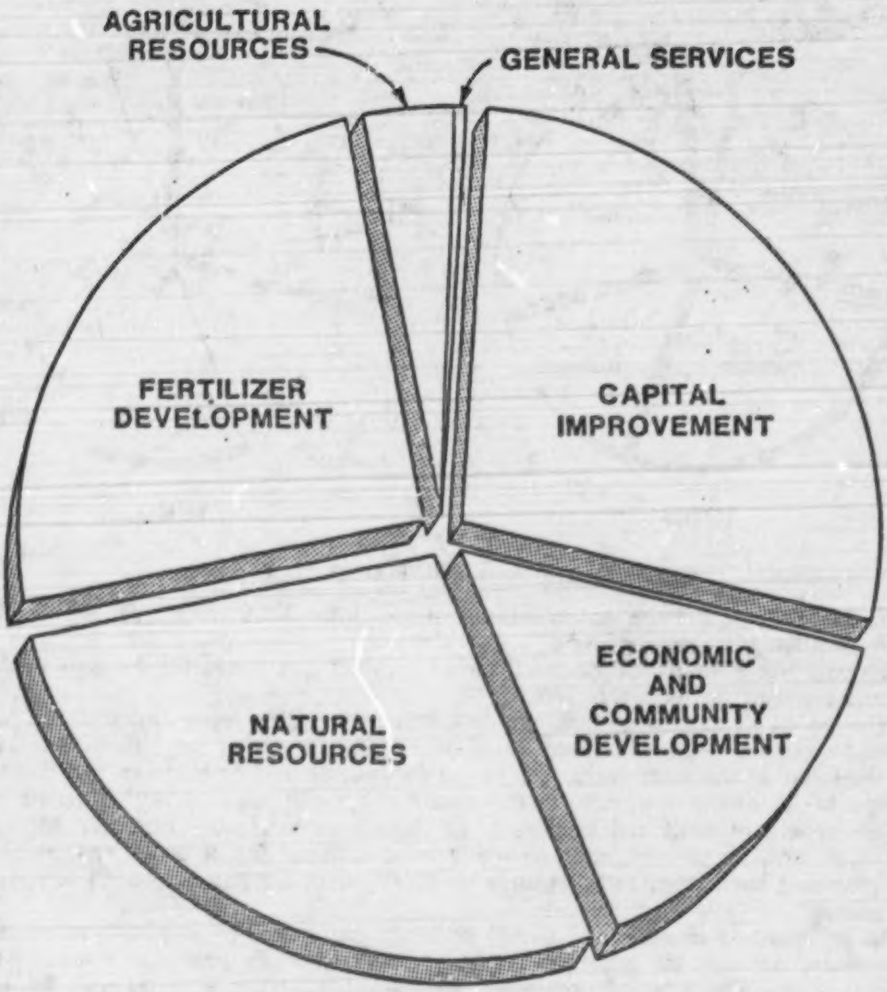


CHART 1—BUDGET TRENDS

As you can see from this chart, excluding various special purpose appropriations, TVA's budget has declined from $162 million in 1980 to $130 million in 1985. Since 1982, the budget has been essentially level in current dollars. In dollars adjusted for inflation, the budget has decreased 40 percent over the 1980–85 period.



1985

CHART 2—1985 BUDGET PIE CHART

This chart shows the breakdown of TVA's fiscal year 1985 budget for its programs in regional resource management, economic development, agricultural resources, and national fertilizer development.

I underscore to the committee the national character of these activities. About one-third of the budget supports the National Fertilizer Development Center, the Nation's only center for fertilizer research. About one-fourth of the budget supports those activities associated with management of the Tennessee River and its reservoirs that the U.S. Corps of Engineers carries out in other sections of the country. About 5 percent of the budget supports operation of Land Between the Lakes, a national laboratory which combines recreation, environmental education, and land stewardship, and in 1984 was visited by persons from all 50 States. Finally, about one-third of the budget supports natural resource and economic development activities. Much of the knowledge and expertise developed by TVA in carrying out these resource demonstration activities are shared with others in all parts of the Nation and overseas. TVA's role as mandated by Congress in the TVA Act, enables it to undertake activities that can serve as important national demonstrations.

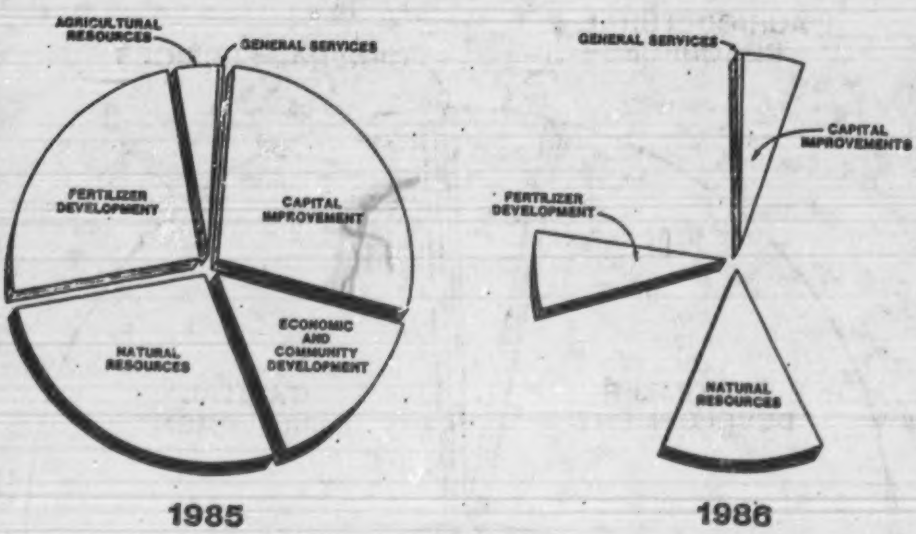


CHART 3—1985 AND 1986 BUDGET PIE CHART

This chart contrasts the administration's proposal for $38.6 million for fiscal year 1986 with last year's appropriation.

I would like now to describe briefly those activities that would fill the gaps in the second pie chart for fiscal year 1986.

The period of economic transition now facing the valley region requires that we redouble our efforts to achieve economic parity with the rest of the Nation. One key to the future of the valley region will be the continued sound development and conservation of its natural resources. In this regard, TVA will have to play a variety of roles—steward of lands and facilities in its custody, partner with institutions and individuals, provider of information on which sound decisions can be based, and explorer of promising but untried paths which other organizations are unwilling or ill equipped to pursue.

In an industrial society water quality problems can arise with startling suddenness, threatening not only the immediate health and welfare of the people as a region but also their long-term economic well-being. We learned this lesson last year with the unexpected pollution problems discovered in Boone Lake in east Tennessee. There is hardly any water quality problem that is not cheaper to prevent than to fix, and this is especially true in dealing with ground water supplies.

TVA proposed to continue its work with State and Federal agencies to demonstrate methods to solve these pressing problems. Another water-related problem is the low level of dissolved oxygen being discharged from reservoirs across the Nation. TVA's program to demonstrate inovative solutions to this problem is of national significance. Seven million dollars was requested for these activities.

TVA requested $5.7 million for its programs in land, forest, and environmental/energy education. The valley's combination of available timber, transportation network, plant sites, ample labor supply, and assured energy provides an exceptional foundation for growth in the forest industry. TVA works in partnership with valley States and with private and other Federal forestry organizations to stimulate demand through creation of domestic and international markets, and provide incentives for industry and private landowners to protect and manage their forests for long-term supply.

Forest program activities focus on a resource that constitutes nearly 60 percent of the valley land base and supports a $3 billion forest products industry that is the region's second largest manufacturing employer. TVA's long-term goal for the development of valley forests is to increase forest productivity by 40 percent, create 30,000 more jobs, and ensure a supply of wood and forest products capable of meeting a large share of the region's and the Nation's future needs by the year 2000.

Environmental/energy education activities are designed to develop an awareness of the interrelationship of valley resources by its residents. A system of university-based environmental/energy education centers and two facilities located on TVA land are the forefront of this effort. This will be implemented in cooperation with schools throughout the valley. Several States are now implementing similar programs modeled after our demonstration.

As part of resource management and development support, TVA requested $500,000 to continue acidic precipitation research that would concentrate on an examination of impacts in the southern Blue Ridge Province, an area identified as potentially vulnerable. These activities are approved by the National Acidic Assessment Plan Task Force and are included in the National Acidic Assessment Plan.

Land Between the Lakes is a 170,000-acre area lying between Kentucky Lake and Barkley Lake in western Kentucky and Tennessee. This area has been developed by TVA as a demonstration to show to the Nation how the land, water, and wildlife resources can be managed in such a way as to provide quality education and recreational opportunities for people from across the Nation. Although it is similar to a national park in some respects, it is much broader in its mission. Perhaps of greatest importance is its role as a laboratory used by educators and students to see first hand that quality recreation opportunities and resource conservation go hand in hand.

While the development and conservation of the valley's natural resource base is important, so, too, is the development of economic opportunity.

The region's industrial base of mature industries faces increasingly intense foreign competition. The most rapidly growing part of the national economy, the service sector, is significantly smaller in the valley. A large percentage of the region's labor force is unskilled or possesses skills more relevant to declining than to growing industries. This skill deficit inhibits the development of faster growing, higher skilled, and higher wage industries in the region. Despite these problems, the valley does have a good potential for development.

TVA, for example, believes that environmentally sensitive management of natural resources is an essential component of—not an obstacle to—sustained economic development.

TVA also relies on many public and private partners acting through cooperative agreement to ensure that its economic development efforts are complementary and that programs are delivered in the most efficient and effective manner.

The Economic Resources Program assists local development efforts and local investment by helping communities obtain a more in-depth understanding of their local economy, the resources at their disposal, and the most practical ways of creating new jobs. TVA requested $15.3 million to continue this work in 1986. Among other activities, these funds would support:

—The Tennessee-Tombigbee Waterway project that facilitates economic development in the valley region of the Tennessee-Tombigbee corridor by using the waterway initially to expand markets for local wood products.

—Special opportunities counties and cities efforts that assist the residents of the poorest valley areas through projects that create jobs, enhance income levels, and develop local resources for economic growth.

—Skills development activities that assist valley States, local governments, educational institutions, and other agencies, as well as business and industry, to develop a more skilled labor force capable of assuming jobs with new and expanding medium- and high-technology industries.

The TVA Community Resources Program places major emphasis on developing local leadership, helping build self-sustaining, community-based organizations, and developing and implementing economic growth strategies reflective of local values. TVA requested $6.7 million to continue these activities, which include:

—The Townlift Program that is designed to help make small- and medium-sized communities more functional, efficient, and competitive. The program emphasizes the economic revitalization of central business districts, where many small businesses are concentrated, and job creation in the services sector.

—Regional waste and water supply activities that are designed to demonstrate advanced solid waste and water supply management practices, improve the effectiveness of hazardous waste management, and demonstrate new wastewater treatment techniques.

Valley agriculture and agriculturally related industries play an extremely important part in the region's economy, employing up to one-third of the work force and generating economic activity of more than $7.5 billion.

The Agricultural Resources Development Program develops and introduces new technology to improve efficiency in agricultural production, increase returns for crop and livestock enterprises, and protect the soil and the environment. Soil erosion has reemerged as one of the largest problems facing the Nation's agricultural economy. TVA's programs have served as a national demonstration which is reducing the loss of this vital element of food production. As the committee knows, TVA's soil conservation efforts are directly coordinated with those of the U.S. Department of Agriculture and the valley States. TVA requested $5.7 million for agricultural resources development.

Fertilizer is one of the most critical purchases a farmer makes. About 40 percent of U.S. crop production is a direct result of the use of fertilizers. With fertilizers, farmers can meet the Nation's food and fiber needs on fewer acres and still export $40 billion worth of agricultural products annually.

TVA has the Nation's only Research and Development Program for dealing with a spectrum of problems involving fertilizer production and use. From start to finish in the research and development process, TVA staff interacts daily with university researchers and educators, members of the fertilizer industry, farmers, and others in the agricultural community to update them on research progress, help integrate new developments into ongoing systems, and solicit ideas on research needs and priorities.

The purpose of TVA's Fertilizer Introduction Program is to develop improved fertilizers and processes in prototype units and to expedite the acceptance of the new technology so that the benefits of research and development are quickly transferred into the Nation's economy. The Introduction Program is the critical link in the process that brings promising basic research into commercial application and use. It is the step which brings the benefits of TVA's Fertilizer Program to the farmer and then to American citizens and taxpayers. TVA requested $13.4 million to support this critical link in the research and development chain.

One of the Nation's greatest unused resources is low-grade hardwood. TVA has underway a program of research to convert these hardwoods into ethanol. Our research, we believe, will lead to a process which will yield 70 gallons of ethanol from a ton of hardwood, a conversion rate which will result in an economically feasible project.

As I have noted earlier, TVA's activities are strongly national in character. We believe the record supports our view that citizens across the country benefit from much of what TVA undertakes in both its appropriated and power programs. We are proud of the many practical, down-to-earth answers to resource development and management problems that TVA has perfected over the years.

But it also is a fact that TVA serves the people of the Tennessee Valley region. We must recognize that certain national economic policies have hit this region much harder than some other parts of the United States, despite TVA's best efforts. In closing, let me summarize briefly the nature of the regional challenge.

At the beginning of this fiscal year, for example, about one of every four counties in the Tennessee Valley had unemployment rates at least twice as high as the national average.

In 1984, the average unemployment rate in the United States was 7.6 percent. In the Tennessee Valley region it was 9.6 percent. There are approximately 135,000 more unemployed workers in the TVA area today than there were in 1979.

Since the late 1970's, the TVA region has not been generating enough jobs to maintain the economic gap that exists between it and the rest of the Nation, much less close the gap.

How can this turnaround from encouraging economic progress of the 1960's and 1970's be explained? There are no simple all-inclusive answers. But a significant factor has been the regional effect of national fiscal policy.

With the region's relatively low per capita income, the Federal tax cut has put comparatively fewer dollars into the hands of valley consumers. Meanwhile, high interest rates have continued to inhibit growth in manufacturing—a crucial sector of the valley's economy.

The region has been similarly affected by sharp reductions in Government spending. The valley's high incidence of people living below the poverty line has caused a disproportionate regional impact from cutbacks in various domestic assistance programs. At the same time, increased defense expenditures have not offset these cuts because of the relative lack of defense-related industries in the TVA region.

The net results, according to TVA's economists, is that the region will have received only about 40 to 50 percent as much fiscal stimulation as the rest of the country for the 1982 to 1985 period.

All of these circumstances have worked to retard the economic development of the TVA region. These facts also suggest that it would be an inopportune time to wipe out those TVA activities that are designed to help the region participate more fully in the Nation's prosperity.

Thank you, Mr. Chairman.

FUNDING HISTORY

Chairman HATFIELD. Does that complete your testimony?

Mr. DEAN. My formal statement; yes, sir.

Chairman HATFIELD. Mr. Dean, I would just like to make one or two observations. I thank you for your statement and presentation as it relates to your budget for 1986. I might add that I personally feel that the proposed budgetary reductions laid out in your presentation go beyond what would be called reasonable and fair.

However, I think that the charts that you present showing a span of years is a good way to summarize TVA's funding history. But, I believe we need to put this into a bigger context. I would like to go back to the years 1960, because I have asked the staff to prepare a little bit of a historic perspective into which to view this whole TVA question.

In 1961, as I have the information, the budget at that time was $20.5 million. By 1970, it had grown to $60.5 million, an increase of 200 percent. Then from 1970 to 1980, the appropriation to TVA increased another 145 percent to $148.7 million. Since 1980, however, the appropriated programs have declined some 20 percent to a current level of $120 million, which is still 485 percent over the 1960–61 level.

There are obviously a number of reasons for these changes in the budget over this span of time. You have inflation, you have lower construction program, but the funding trend for ongoing programs and activities basically have been moving up. The budget request for operating expenses has increased nearly 50 percent since 1980. During that same period, the capital investment program has decreased nearly 65 percent. This was principally due to the phase-down, as I understand it, or completion of major capital construction projects which received almost $350 milion in funding during this period.

I make these observations not to minimize the effect of the budget before us and its impact upon ongoing activities, but to underscore the need to make changes in this budget by this committee, to do so in a calm way that looks at it factually, and to remind you, as I am sure you are aware, that this committee has a very difficult task to construct an Energy and Water Appropriation Bill for fiscal year 1986. It will not be easy. This subcommittee is faced with adding nearly $800 million over the President's budget request just to maintain the existing programs and activities at current levels.

At the same time, we are faced with a request for an additional $700 million increase in nuclear weaponry and other military programs in this same budget.

So clearly, hard decisions and choices will have to be made, and reductions must be found in order to stay within budget guidelines if we are to have any hope of the President signing this bill once the Congress acts upon it. I believe the Tennessee Valley Authority has demonstrated over the last several years that you can respond and be effective managers, and I want to say that my hope and my expectation is that this committee will treat you fairly and that each agency that comes within this subcommittee's jurisdiction will be treated the same way.

Again, let me end by saying I do not think that the budget levels as represented in this budget are either fair or are they reasonable. We are going to have to make some adjustments. I know that I only speak as one individual, but I have a sneaking suspicion that the Senator from Tennessee is going to be very supportive of the effort to make some adjustments in this budget.

I would like to yield to the Senator from Mississipi and the Senator from Tennessee, whoever wishes to ask any questions at this time.

TVA'S HISTORICAL ROLE

Senator STENNIS. Mr. Chairman, I thank you very much, and I will not take very long.

Are you in an emergency for time?

Senator SASSER. No sir, I am not. You go right ahead.

Senator STENNIS. Mr. Chairman, I get much satisfaction, and more perhaps, perhaps, out of these hearings and this testimony and what is being done, more than any other. There are many, many items that we consider here with this committee in the course of a year, and also, my memory and contact with TVA goes way back. I remember when it was first proposed and said the primary purpose was to create a capacity to make fertilizer, and that was truthful, for the use in the areas surrounding. That would be the peacetime use.

The immediate use was for ammunition as World War I was well on its way. There were shortages of ammunition, and this was to be started up on a "quickie" basis to make ammunition for use in a war that was then raging in Europe. And in peacetime, the proposition was described to take its place. And I remember, too, when Mr. Henry Ford made a personal offer. He was the first big operator in America that ever paid $5 a day to a laborer. He was the first one that offered this big money for prospective industrial units like TVA.

But that didn't go through. It lay in abeyance a while, and I remember the time when the Senator from Nebraska, Mr. Norris, picked up the cudgels and started his fight. This thing became a reality. It came on here then later where TVA, when TVA had to make a down-to-the-last-ditch fight for every single dollar it got for expansion, for expansion, for development of its own powerplants, every dam, every extra unit. That was because of the very strong opposition to it, not because of the way it was operated, but because it was in conflict, at that time, with private enterprise.

Then finally, if I may refer to it, and I have the greatest of pride in it. And I still think I would take this action as a fresh event. That is, that the part of Mississippi where I live was included in TVA on my motion through the area that we are dealing with.

ECONOMIC DEVELOPMENT

But in a very small way—if you could just restore that chart there just one minute—I want to be sure that I understand. Your industrial economic improvement program, your leadership program, and all that you have, which one of those pieces and those colors represent that?

Mr. Long. The green area [refers to pie chart].

Senator Stennis. Is that the one that is technology and benefits and all?

Mr. Long. Yes, sir.

Senator Stennis. I can't read it from here.

Mr. Long. That is correct; it is the green one here.

Senator Stennis. What does it say?

Mr. Long. Economic and community development.

Senator Stennis. I just wanted to be sure I was looking at it correctly. Here is my testimony on that, Mr. Chairman.

I have been down in the valleys, up on the hills, on the rock piles. I have been over this territory personally, not just to take one trip, but for years, and I know what a very small sum of money now is doing for large areas of the TVA region there, large areas, where the people put up part of the money themselves, but the technology and the know-how and the leadership and a small percent of the money comes from TVA.

I don't know of any investment anywhere in America that is turning out more benefits, lasting benefits for the people, the little people, the people that haven't had their chance in life that we have had. I don't know of any that is doing any more than this group there, and I found this out. I went out so I would be in personal contact with these workers, these technicians, these people that give direction and make the dollar stretch a long ways as they spend it.

I don't want to overspeak now or brag on anyone. There is a cause that is big here, but you just don't find a more dedicated, more apt, more willing group of people. These are technicians who have so much new technology I don't know what to call them.

They get results for these small amounts of money. You have to put up your share before they go to turning the wheel. It is running on a businesslike basis. I want us to make our part, so-called, of the contribution.

I am with some others in the Senate on this deficit reduction. I voted 3 years ago for a bill that made across-the-board reductions, I mean equal percent, as near as equal as we could, in all these programs. It was said: "Give us something and let all of them get along on less." That's the way we used to farm in Mississippi. If we missed a crop, we just rolled up our sleeves a little further and said, "Call in the tenants and everybody else; that now next year, we are going to make this up, but we are going to get along on less. We will do without some things. All those few that don't want to do that, go looking for another home. Otherwise, report back here in 10 days. And for those who want to stay, we will start work on next year's crop."

Understand the boy, they had me believing I was absolutely indispensable an assistant manager——

[Laughter.]

Senator STENNIS [continuing]. Of all the farm. The next morning, I counted the people as they came in. Every one of them came back. "We are ready to go next year."

So that is the way we were going at things then, and now bringing in a few hot wires like the electricians and just a few other improvements, we are getting along. Let me tell you, on this committee the finest revelation I have seen in many ways is when I took a trip way out West, visiting among others the chairman's home State. They really know how to handle water out there. You bathe with it besides drinking. [Laughter.]

You've grow grain, you grow everything, you use it for power and fertilization. I am proud of what has been done for that area of the country. Just a start, that was all you needed. You had the will and everything else.

All right. Back to this matter. [Laughter.]

BUDGET REDUCTIONS

Now, then. I am going to help reduce this total budget as much as I can. I'm not saying how much; I don't know. I don't know. I'm not just for reduction just because somebody else is. But I am going to use judgment on it, and I will go about it fair, as most will, and I want TVA to make its part of the contribution to deficit reduction. But I don't want TVA just nullified and taken apart and abandoned, abandon the most productive part of all these programs in the area of getting jobs, jobs for people that haven't got a chance to create sources of jobs themselves. They don't have the money, these fine people. They are not ignorant. They haven't been neglectful, they just don't have the capital resources.

These little programs go a long way to giving them this technology and a little money. Now, I thank you. I talked too long, but I am going right now from this right on down the line until this bill is finally signed, whenever it is.

I feel like you want to be with me and you will be with me if you continue to see merit in it. I think that that kind of job-getting, making enterprise is the last thing, it is the last thing to eliminate rather than the first thing.

So I thank you for your time, and I thank you gentlemen for what TVA is doing. I don't want to brag on them. We talk on the phone sometimes. I was trying to get some of them the other day. Knoxville, TN, was snowbound. Planes couldn't get in. [Laughter.]

But you were on duty. They were at the desks. All right, I thank you for what you are doing.

Chairman HATFIELD. Thank you, Senator Stennis.

Senator Sasser?

TENNESSEE VALLEY ECONOMIC CONDITION

Senator SASSER. Thank you, Mr. Chairman. I don't know that I can add much to the eloquent statement made by the distinguished Senator from Mississippi. I sometimes think maybe we ought to summon the Director of OMB over here and let Senator Stennis give him a lecture on what the TVA has done over the years, because no one can express it better than my friend from Mississippi.

Chairman Dean, let me just ask you a few questions. Since fiscal year 1980, how much in real terms—that is, dollars corrected for inflation—has the TVA budget been cut?

Mr. FREEMAN. It is 40 percent in real dollars.

Senator SASSER. For real dollars, corrected for inflation, your budget has been reduced 40 percent since fiscal year 1980. What is the per capita income in the entire region in which the Tennessee Valley Authority operates?

Mr. DEAN. I don't know exactly. I know that it is about 80 percent of the per capita income in the country as a whole. You know people ask why it is not up to the national average after 50 years of TVA, but I would like to emphasize the fact that when TVA was founded in 1933, per capita income was about 40 percent. So there has been some progress made in that area, but we are not up to the level of the rest of the country at this point in time.

Senator SASSER. So even though progress has been made, you are still lagging about 20 percent below the national average in per capital income in the regions served by the Tennessee Valley Authority?

Mr. DEAN. As you well know, Senator, there are many sections of the area we serve which are in pretty bad shape.

Senator SASSER. Do you have any figures before you in which you can contrast the poverty rate in the Tennessee Valley region with the poverty rate in the rest of the Nation?

Mr. DEAN. We find that close to 25 percent of the people in the valley States are below the poverty line, were below it in 1982 and 1983. This is an increase from the percentage living in poverty in the seventies, which was about 15 percent.

The percentage of population in poverty in the valley has consistently been 30 to 40 percent higher than the national average.

Senator SASSER. So we have got a situation where, consistently, there are 30 to 40 percent more living in poverty in the Tennessee Valley region than in the rest of the Nation, and we see a situation where the poverty level is starting to increase on us. In other words, economic progress in the region has been retrogressing relative to the poverty line over the past 4 or 5 years, is that a correct statement, Mr. Chairman?

Mr. DEAN. That is correct. The valley economy has suffered some setbacks in the last few years.

UNEMPLOYMENT

Senator SASSER. What about the unemployment rate? Can you contrast the unemployment rate in the regions served by the Tennessee Valley Authority with the unemployment rate for the Nation as a whole?

Mr. DEAN. It is 2 percent higher than the Nation as a whole, Senator.

Senator SASSER. Mr. Chairman, we have, over the past few years, seen a new mix of fiscal and monetary policy that some pundits have come to call Reaganomics, I suppose, for a better term. What it consists of are essentially tax cuts followed by substantial cuts in Federal spending. Tell us how TVA, the regions served by TVA have fared with regard to the rest of the country during the time when this mix of fiscal and monetary policy has been in place?

Mr. DEAN. When a bigger percentage of your people are making less money, then tax cuts do not stimulate the economy as much as they would in other parts of the country. There has been also an emphasis on defense spending, and the area that we serve just doesn't have many defense industries.

So the combination of these factors has caused us to slide back. Also, there has been a lessening of the strength of the old primary industries such as steel, aluminum, and certain types of heavy manufacturing. There has been, as you well know, a shift to what we call the knowledge- and service-type industries.

Senator SASSER. So in the Tennessee Valley region, in recent years, you have experienced a problem in that we have not been able to benefit from the tax cuts because of a relatively lower per capita income in comparison with the rest of the Nation; we have not been able to benefit in that region from the increased defense spending, such benefits as that does bring by way of increased employment, because we have literally no defense industries in the Tennessee Valley region, and we have also suffered from the decline of more traditional industries which have been hurt considerably by the overvalued dollar and imported goods cutting into our region.

Isn't that a fair assessment?

Mr. DEAN. That is a fair statement, Senator.

Senator SASSER. I wanted to get these facts on the record so that we could have some basis on which to make a judgment as to whether or not the budget that is being proposed here is fair and adequate to do the job, and I might say the best views that I have heard in a long time is the statement made by our distinguished Chairman of this committee that he felt this budget proposed here for TVA was not fair and not equitable.

TVA'S NATIONAL IMPACT

Mr. Chairman, I, for the record, I would like to have TVA point out just some of the programs that have been undertaken by the agency which have had a broader national impact in scope. We have been talking here about a particular region, but TVA is also an agency which ideally has national scope and national impact, and would you detail for the record, Mr. Chairman, some of those programs that the TVA fosters which have had a national impact?

Mr. DEAN. Senator, as a matter of fact, the biggest proportion of our appropriated funds is used for projects which have a significant national impact. About a third of our current budget supports the National Fertilizer Development Center and our agricultural programs which actually serve the entire Nation. The Fertilizer Institute, for instance, is very strong in their endorsement of our fertilizer program, and the fertilizer industry is a friend of TVA because we are, in essence, their research arm and have developed most of the patents which they are using.

About another fourth of our budget supports the operation of the Tennessee River system, which is certainly a national asset. The river system would be operated whether the TVA was in existence or not. It might be operated by the Corps of Engineers if it were in some other part of the country, but it would be operated because it is part of the national navigable water system, and it has flood control benefits as well.

About 5 percent of our budget supports the Land Between the Lakes, which is a natural resource laboratory which involves some of the best features of an outdoor laboratory with some of the best features of parks. It is located in the eastern part of the country, where, obviously, we don't have nearly as much park land per capita as we have in the West.

Another third of our current budget supports natural resource and economic development activities. Many of them spill over with good results in other parts of the country. Some of the things that I think of are our efforts to improve the quality of our reservoirs. We have some places where we need to work on improving the dissolved oxygen level for economic as well as other reasons.

We are doing some interesting studies in that area. We are doing some studies on ground water, which is a very important thing. We have some experts on water quality who really are of value to the entire country.

So those are a few, Senator. I can give you some more in the record.

Senator SASSER. Thank you.

[The information follows:]

PROGRAMS WITH SIGNIFICANT NATIONAL IMPACT

TVA addresses itself to the most important natural, agricultural, economic, and human resource issues facing the valley region in the most cost-effective and efficient manner. We consciously plan these efforts in a way that significant results can be replicated in other parts of the country. This involves careful evaluation and an effective information/technology transfer mechanism.

In addition, the fact that the National Fertilizer Development Program, Land Between the Lakes, and reservoir management programs are either national in scope by design or serve in lieu of other Federal agencies' efforts reinforces the national character of our programs.

Examples of TVA national demonstrations having distinct regional benefits cover a wide range. They involve major initiatives, such as the atmospheric fluidized-bed combustion [AFBC] project aimed at achieving cleaner, more efficient burning at coal-fired powerplants. Other accomplishments have been made in less visible areas, such as new low-cost techniques in underwater archaeology photography, seeding mine reclamation sites, and artificial reproduction of endangered mussels.

As a part of this effort, we have established cooperative agreements between TVA and the National Rural Center dealing with the training of rural community leaders. We are also working with the National Rural Electric Cooperative Association so that NRECA can emulate nationally our effort to use rural electric cooperatives to stimulate economic development and job creation activities.

In order to avoid duplication with other Federal and State efforts, we have in place or are working toward agreements with several agencies within the Department of Agriculture, the Environmental Protection Agency, the Department of State, the Department of Commerce, the Department of the Interior, the Department of the Army, the Appalachian Regional Commission, and the National Cooperative Bank, as well as the seven States of our region. The agencies with whom we cooperate pick up ideas from our research or action programs that can be used elsewhere in the United States and even abroad.

Core components of most TVA programs are fundamentally demonstrations with potential national significance. Examples of this work include:

Reservoir releases improvements.—TVA's investigation of methods to increase dissolved oxygen levels in water releases from high dams, while not yet complete, has already resulted in a Corps of Engineers aeration project at their Clarks Hill Dam using techniques developed by TVA. Likewise, another Corps project is under consideration that will construct a reregulating weir similar to the one TVA completed this year on the Clinch River. TVA's current work in dissolved oxygen problems in some smaller tributary reservoirs has direct application for many private or municipal reservoirs and some western projects managed by U.S. Bureau of Reclamation.

Tick research.—TVA and the U.S. Department of Agriculture are engaged in a joint effort at LBL to determine the most effective way to control tick populations in large areas such as parks, wildlife refuges, and recreation areas. Results could also be beneficial to management of private lands. In addition, TVA is cooperating with commercial producers of repellent to field test and assess chemical methods of tick control.

Townlift.—TVA's integrated approach to revitalization of downtown areas of rural communities is being applied in the State of Georgia by communities outside the valley region. Townlift staff are in their third year of a contractual agreement with USAID as technical advisors to apply broadly based community development techniques developed by TVA to Southeast Asian and African cities.

Forestry.—TVA has been an early leader in applying microcomputer-assisted techniques to improved forest management. These tools are already being employed by valley region State forestry departments, the U.S. Forest Service, and private consulting foresters. To broaden participation and activities, much of this development is being spun off through the independent Forest Resources Systems Institute.

Environmental/energy education.—The planned network throughout the valley region of 17 self-sustaining centers for expanding support to local schools is just over halfway along in its development. At this time the States of Oklahoma, Wisconsin, California, South Carolina, Florida, and South Dakota have also initiated systems modeled after TVA's concept.

Skills development.—In order to create a more employable valley work force, TVA has been working with States to research and demonstrate new state-of-the-art education and training programs. This work has already resulted in the development of an automated "factory of the future" to retrain employees and a program to improve the instructional capability of math and science teachers which has been recognized as one of the best innovative programs in the Nation.

Fertilizer technology introduction.—TVA's fertilizer technology introduction program is a prime example of spending tax dollars to support an effort that benefits all consumers across the Nation through the widespread dissemination of fertilizer technology.

This technology is derived from research, development, and demonstration facilities located in the world's only National Fertilizer Development Center, owned and operated by TVA at Muscle Shoals, AL. Critical feedback from cooperating universities, fertilizer manufacturers, and distributors serves to upgrade manufacturing processes and products, and thereby allows chemical fertilizers to be sold in the marketplace at lower cost to the farmer. These efforts keep food prices down and ultimately benefit every consumer.

Agricultural resources development.—Two activities within this program have tremendous potential for use on a national scale. The first, soil conservation, has been successfully demonstrated in west Tennessee, Mississippi, and Alabama and is readily adaptable to almost any area plagued with the loss of productive topsoil. TVA's program is designed to stop soil loss, restore nutrient value to the remaining soil, and halt surface and ground water pollution caused by erosion.

The second, farm market development, which is designed to aid the small farmer, could have national demonstration potential in any area where logistics prevent the delivery of quality products on time from the producer to the consumer. TVA's program includes helping increase volume through existing markets, developing marketing skills for managers and farmers, and increasing the efficiency of the marketing system.

Specific projects include (1) assistance to vegetable growers in organizing cooperatives, (2) further development of federated cooperatives to improve communications, supplying market intelligence, and pooling orders, and (3) development and implementation of programs to increase market hog production in the region.

Hardwood fuels research.—This TVA program has national demonstration application since the hardwoods used in the process to produce ethanol from wood extend through the Appalachian area, up the east coast, and into the Ozark region. The research information developed will also be suitable for use with abundant western softwood trees. Marginal open lands also exist in many areas outside the TVA region which could be more effectively used to provide biomass feedstock for the cellulosic hydrolysis process. This type of program effort offers unique opportunity in areas of abundant biomass resources to increase economic development activity and generate jobs.

WATER QUALITY PROGRAMS

Senator SASSER. One final question, Mr. Chairman, then I will conclude.

Chairman Dean, water quality programs in the OMB budget have been virtually eliminated. I am familiar with one of the water quality projects that has been undertaken by the TVA under the budget that the Tennessee Valley Authority originally submitted to the administration. That project provides technical assistance to demonstrate water quality improvements in the Bristol, TN-VA, area. There is no doubt that this activity certainly benefits the people of that area. But I suspect it has a very desirable and important spinoff in other ways, as well. Does this project have any national value?

Mr. DEAN. Yes, sir. We are sure that everyone will agree that one of the most important natural resources that we have in this country is fresh water, and we are learning more and more the importance of it and how serious man's threats to fresh water have been. It happens that in the Bristol area that you mentioned, we have a lake that has become overloaded with certain types of waste, we have dissolved oxygen problems, and we are working cooperatively with the local governments to try to solve that problem.

But the results of that type of experiment can be exported to any part of the country. This is typical of problems that are found in other parts of the country.

Senator SASSER. TVA is prepared to share that technology with other agencies and other regions of the country, obviously.

Mr. DEAN. We are right proud of the fact that we have thousands of visitors each year, and they are not just coming to see our beautiful scenery in east Tennessee. They are coming to study some of the things we are doing that can profitably be exported to other parts of the country and the world, for that matter.

Senator SASSER. Mr. Chairman, I have additional questions which I will submit for the record. I understand we have a full committee markup beginning very shortly. Thank you very much, Mr. Chairman.

Thank you, Chairman Dean.

PRIORITY AREAS FOR FUNDING RESTORATION

Chairman HATFIELD. Thank you, Senator Sasser.

We do have other questions, gentlemen, we will submit to you for your response in writing.

I wonder if you could briefly summarize what you would consider, though, at this point as the priority areas for restoration of funding in the budget that has been either excised or greatly reduced?

Mr. DEAN. In addition, we have submitted one letter, Senator Hatfield, at the request of one of the committees, which, if we were asked to go through an exercise with the 10-percent reduction. That is a matter of record. If it is not a part of your record, we shall certainly make it a part of the record.

Chairman HATFIELD. All right, thank you. Thank you again for your sojourn here to Washington. We appreciate very much the day-to-day work that you do. We will do our best to give you the kind of resources necessary to carry that out.

[The information referred to follows:]

FUNDING PRIORITIES

The Board carefully balanced the need for budgetary restraint and the tremendous needs in the valley region when it prepared its request to OMB. Our specific priorities are set forth in the additional budget material provided at Chairman Whitten's request. In view of budgetary constraints, we support a freeze at the 1985 level of $129.5 million.

LETTER FROM CHARLES H. DEAN, JR.

MARCH 1, 1985.

Hon. JAMES J. HOWARD,
Chairman, Committee on Public Works and Transportation, U.S. House of Representatives, Washington, DC.

DEAR CHAIRMAN HOWARD: We are enclosing a table which provides information that we understand the TVA staff members were asked to provide during their briefing of your committee staff on February 8. The information is about ways in which TVA would use its resources if funded at a level 10 percent below the 1985 appropriation of $130 million ($117 million).

We have been able to deal in summary form with a 10-percent cut. However, a 20-percent cut would require a new ground-up reassessment by each program manager and a reprioritizing of the total budget by the TVA board. It is not feasible to initiate such an exercise at this juncture of the budget process.

Thank you for your interest in and support of the TVA program.

Sincerely,

C.H. DEAN, JR., *Chairman.*

BUDGET FINANCED FROM APPROPRIATIONS

[In thousands of dollars]

Program	1985 Estimate	1986 Estimate	1986 with 10 percent reduction[1]
Natural resources:			
Capital investment	19,455	6,086	5,263
Operating expenses	42,475	20,313	46,623
Total natural resources	61,930	26,399	51,886
Economic and community resources:			
Capital investment	208		
Operating expenses	22,501		20,040
Total economic and community resources	22,709		20,040
Agricultural resources development: Operating expenses	5,821		5,730
National energy demonstrations: Capital investment	13,069		
National fertilizer development:			
Capital investment	6,395		5,731
Operating expenses	38,610	10,000	31,675
Total national fertilizer development	45,005	10,000	37,046
General services:			
Capital investment	2,893	1,475	1,567
Operating expenses	875	731	731
Total general services	3,768	2,206	2,298
Jobs bill (Public Law 98-8)	14		
Total budget financed from appropriation	152,316	38,605	117,000
Financing—Funding of appropriations activities:			
General appropriations	120,000	38,605	
Deferred from 1984 to 1985	9,192		
Congressionally directed use	355		
Total appropriation	129,547		117,000
Other unobligated balances	24,307		
Rescission (sec. 2901, P.L. 98-369)	−1,538		
Program total	152,316	38,605	117,000

[1] See following for description of areas to be cut under this assumption.

At a funding level of $117 million, the following reductions would be made from the $135 million requested of OMB:

Natural resources—Capital investment.—Dam safety activities would be reduced through a combination of programmatic cuts and by funding a part of the program using power system funds to the extent that the power program benefits from the projects (−$10 *million).*

Natural resources—Operating expense.—General reductions would be applied to the several natural resource program areas (−$1 million).

Economic and community resources—Operating expense.—General reductions from these program areas (−$2 million).

National fertilizer development—Capital investment.—Reductions would be made to eliminate storage facilities planned for construction (−$2 million).

National fertilizer development—Operating expenses.—Reductions would be made in the fertilizer introduction program (−$2 million).

General services—Capital investment.—A reduction would be made in the amount of support equipment to be purchased (−$1 million).

ADDITIONAL PREPARED QUESTIONS FOR THE RECORD

Senator STENNIS. Mr. Chairman, may I submit questions to the record?

Chairman HATFIELD. Yes. Yes.

The Senator from Mississippi has additional questions, and other committee members may have questions, as well, that we will place in the record for response.

[The questions and answers follow:]

SUBCOMMITTEE QUESTIONS SUBMITTED BY CHAIRMAN HATFIELD

MAKEUP OF TVA REGION

Question: Members of the TVA Board have been quoted as saying that "TVA is unlike other areas of the Nation." What is meant by this statement? How is the Tennessee Valley region different from other rural areas around the Nation?

Answer: Each region of the country, of course, has a unique history, culture, resource base, and economy. When TVA was organized the Tennessee Valley was unlike other areas primarily because it was so much poorer than many other areas of the Nation. Many of its natural resources were either seriously underutilized, such as its abundant water and forest resources, or were seriously deteriorated through ignorance and abuse, such as its soils. The Valley was isolated from the Nation's economic and social mainstream both by a uniquely rugged topography and poor transportation.

As in the rest or the country, many changes have occurred in the Tennessee Valley in the 50 years that have passed since TVA was formed. Some problems, such as widespread flooding, have been solved. Some of the same problems remain, others have reemerged, and new ones have been identified. The Valley now has a larger proportion of its population employed in manufacturing than the U.S. average, in contrast to the significantly smaller proportion which existed when TVA was first organized. More of the Valley's manufacturing is located in rural areas than is true nationally. Much of the Valley's heavy industry chose to locate in the Valley because of plentiful and cheap electricity. The Valley's light manufacturing was attracted primarily by an abundance of productive and relatively cheap labor, as well as abundant power, pleasant environmental amenities, and attractive communities. The Tennessee Valley, as a consequence, has a denser rural population, a higher proportion of which is employed in manufacturing than is true in almost any other rural area of the Nation.

Many of the firms located in the Valley have experienced slow market growth and increased competition from imports recently. Fewer branch plants are being started and less efficient facilities are being shut down. As a consequence rural unemployment rates are extraordinarily high. One of every four counties in the Tennessee Valley has an unemployment rate at least double the national average. Employment opportunities in rural areas have decreased. Nonagricultural employment in the nonmetropolitan parts of the Valley is only about 95 percent of its 1979 level.

Question: From a national policy standpoint, forgetting for a moment the TVA Act, why should the Tennessee Valley region receive additional economic or development support not available to similar areas in other parts of the country?

Answer: The TVA region receives no measurable Federal support not available to other regions.

First, some basic TVA programs are very similar to other Federally supported programs that do roughly the same things in other regions of the country. For example, TVA is best known for building a system of dams and reservoirs which were designed and are operated in an integrated way to control floods, facilitate navigation, generate hydroelectricity, and provide recreation opportunities. The Bureau of Reclamation was created as a part of the Department of the Interior in 1902 to provide similar water-resource-related services to the 17 westernmost States. The Army Corps of Engineers builds and operates similar water projects without any geographic limitations. It is interesting to note that in 1984 the Bureau of Reclamation's budget, expressed on a per person basis for States they serve, was $10.58. TVA's Federal appropriations for roughly analogous water-resource-related functions was $9.83, calculated on the same basis.

Second, TVA is a Government-owned corporation supported largely by revenues from the region. Of the Tennessee Valley Authority's total budget, 96 percent comes from the revenues of the TVA power system. Proceeds from the sale of electricity have paid for the operating cost of the power system since its inception. Prior to 1959 congressional appropriations were used to build its facilities, but since that time the TVA power system has been totally self-financing. Moreover, TVA has been repaying the Treasury for the pre-1959 Federal investment at current rates of interest. TVA's appropriated and power programs are financially separate, but on a purely cash basis TVA's payment to the Treasury for fiscal year 1985 of $116 million will be well in excess of the $85 million (excluding funding for the National Fertilizer Development Center, which is a national, not regional program) it received for regional resource and development programs.

Third, many TVA programs provide services that are national rather than regional in scope. In 1985 the Congress appropriated about $130 million for TVA's nonpower programs. About $45 million of this total went to support the work of the National Fertilizer Research Center, which develops, tests, and demonstrates new fertilizer production and use techniques throughout the Nation. Similarly, a significant portion of the flood control benefits of the TVA reservoir system go to the people living along the lower Mississippi Valley, since the system's operation helps control flooding along the Mississippi as well as the Tennessee Rivers. Historically, many programs initiated at TVA, such as soil conservation, rural electrification, and nonstructural flood damage reduction techniques, have served as demonstrations for other Federal or State agencies which implemented them on a national scale.

Fourth, economic and social problems in the Tennessee Valley have been particularly severe. TVA was organized because the Tennessee Valley was an exceptionally deprived and poverty ridden part of the country in the early 1930s. Significant progress has been made, but the Valley remains one of the poorest regions or the Nation. Incomes in the Valley are clearly well below the U.S. average, with about 30 percent more families in the Valley existing on incomes less than $10,000 and 40 percent more families below the poverty level.

Finally, TVA programs comprise such a small share of Federal spending--even Federal spending explicitly distributed on a regional basis to States and localities--that they do not change the balance of the flow of funds through the budget to different regions in a significant or even discernable way. The principal domestic programs by which Federal revenues are channeled to States and localities are public assistance, Medicaid, revenue sharing, the highway trust fund, education aid, EPA waste treatment construction grants, low rent public housing, community development block grants, and manpower training. In 1981 total Federal spending in these areas was about $93.3 billion. The four principal Valley States (Alabama, Kentucky, Mississippi, and Tennessee) received $5.9 billion. On a per capita basis the U.S. average was $407, and the average for the principal Valley States $403. The average variation (from the average) among States in the per capita amount of Federal aid they received, as measured by the standard deviation, was $83.* The total TVA budget from Federal appropriations on a per capita basis came to about $20 in 1981. If the share going to support fertilizer research and development and a special program of energy demonstrations, both of which have a national rather than Valley clientele, are not included in the computation, the per capita figure drops to about $11. If the water resource programs are excluded on the basis that similar programs are provided by other Federal agencies in other regions, the value drops to about $4. Clearly none of these computations support the view that TVA changes the flow of Federal funds among regions in a significant way. At most, TVA's appropriation amounts to less than one-quarter of the "average variation" (or standard deviation) that normally occurs between States. Moreover, if the last number is used, TVA only pulls the average for the Valley States back to the national average--despite demonstrably higher needs.

ECONOMIC GAINS

Question: Review briefly the economic gains since 1933 in such things as per capita income, employment, population, and the like in the Tennessee Valley area.

Answer: In 1933 the per capita income of the Tennessee Valley was $168. This was about 45 percent of the U.S. level. By 1979 the region's income per capita had risen to $6,782 or 78 percent of the U.S. levels. No further gains relative to the United States have been recorded by the region since 1979, and some losses have occurred.

The factors that account for most of the region's per capita income growth relative to the United States have both been job-related. The first factor was the changing industry mix in favor of manufacturing, drawing underemployed, surplus labor out of agriculture and other low-wage sectors. The Tennessee Valley is now a manufacturing center, much more dependent on manufacturing than the United States as a whole. The Tennessee Valley's rural areas depend more on manufacturing jobs than the cities. The second key factor in raising per capita income was the fact that more jobs became available. In the World War II period, from 1940 to 1950, employment in the Valley rose from 40 to 50 percent of the working-age population; by the late 1970s nearly 60 percent of the working-age population was employed. In part this greater participation rate in the work force reflects overall U.S. trends in multiple-earner families, greater participation by women and minorities, and an older work force. However, it has occurred more rapidly in the Tennessee Valley, and it accounts for much of the Valley's ability to make progress toward U.S. income levels.

The Tennessee Valley saw a steady outflow of its population from the middle of the 19th Century through the 1960s. The States of Tennessee, Kentucky, Mississippi, and Alabama lost 3 million population in outmigration from 1940 to 1970. The mid-1970s saw a historic turnaround, as the Valley States achieved for the first time a net inflow of workers entering the region seeking jobs. However, the end of the region's manufacturing expansion, combined with the recession of the early 1980s, has stemmed this inflow, and more people have left than have entered the region thus far in the 1980s. The current outlook for population growth in the Valley during the rest of the decade is for rates of growth, at best, near that of the United States.

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*Excluding the District of Columbia and Alaska as extreme cases, which would make the standard deviations much larger if included.

Question: How does the per capita income in the TVA area compare today with the Southeast region and the United States as a whole? How does the Tennessee Valley region compare with other economically depressed region?

Answer: As shown in table 1, the Southeast region ranks at the bottom of the census regions list in terms of per capita income. In 1982 per capita income in the Southeast was 86.4 percent of the national average. The TVA region is poorer than the rest of the Southeast. Its per capita income was 76.6 percent of the U.S. average in 1982. Per capita income in the TVA region was 91.4 percent of the entire Southeast.

Table 2 shows the bottom States in terms of per capita income. Obviously, the TVA region is still near the bottom of the list.

Table 1

Per Capita Personal Income - By Region
1982 and 1973

	1982			1973		
	Dollars	Percent of National Average	Rank	Dollars	Percent of National Average	Rank
United States.........	11,107	100.0	-	5,010	100.0	-
New England.........	11,916	107.3	3	5,283	105.4	3
Mideast.............	12,087	108.8	2	5,476	109.3	1
Great Lakes.........	11,055	99.5	5	5,258	105.0	4
Plains..............	10,789	97.1	6	5,167	103.1	5
Southeast...........	9,602	86.4	8	4,253	84.9	8
East South Central:						
Alabama...........	8,649	77.9	47	3,825	76.3	48
Kentucky..........	8,934	80.4	43	3,997	79.8	43
Mississippi.......	7,778	70.0	50	3,453	68.9	50
Tennessee.........	8,906	80.2	44	4,111	82.1	41
Southwest...........	11,122	100.1	4	4,441	88.6	7
Rocky Mountain......	10,754	96.8	7	4,743	94.7	6
Far West............	12,238	110.2	1	5,394	107.7	2
TVA REGION..........	8,505	76.6		3,888	77.6	

Table 2
Lowest Per Capita Income States in the United States
1982 and 1973

1982			1973		
State	Dollars	Percent of U.S.	State	Dollars	Percent of U.S.
Mississippi....	7,778	70.0	Mississippi....	3,453	68.9
Arkansas........	8,479	76.3	Arkansas.......	3,791	75.7
South Carolina.	8,502	76.5	Alabama........	3,825	76.3
TVA REGION.....	8,505	76.6	Lousiana.......	3,855	76.9
Alabama........	8,649	77.9	TVA REGION.....	3,888	77.6
West Virginia..	8,769	79.0	West Virginia..	3,902	77.9
Utah...........	8,875	79.9	South Carolina.	3,903	77.9
Tennessee......	8,906	80.2	New Mexico.....	3,944	78.9
Kentucky.......	8,934	80.4	Kentucky.......	3,997	79.8
Maine..........	9,042	81.3	Utah...........	4,072	81.3
North Carolina.	9,044	81.4	Tennessee......	4,111	82.1
New Mexico.....	9,190	82.7	Maine..........	4,124	82.3

Question: How many of the 201 counties which make up the TVA region are classified as "Distressed Counties"?

Answer: Executive Order 12073 required executive agencies to emphasize procurement set-asides in labor surplus areas, which are defined as areas of "substantial unemployment." The Secretary of Labor is responsible under that order for classifying and designating areas as labor surplus areas. Using this as a definition of "distressed counties," for the period October 1, 1984, through September 30, 1985, 162 counties, 80.6 percent, of the TVA region have been designated labor surplus areas. The Department of Labor has classified 53.7 percent of the Nation's counties as labor surplus areas.

Question: What percentage of the 201 counties equals or exceeds the Nation's average for per capita income?

Answer: Only two, 1 percent, of the region's 201 counties exceed the Nation's average for per capita income.

Question: What percentage of the 201 counties equals or exceeds the average growth rate for the Tennessee Valley region?

Answer: Between 1970 and 1980, 56 percent (113) of the counties in the region exceeded the regional average in population growth. From peak to peak of the last business cycle (1973-1979) 49.3 percent (99) of the counties in the region exceeded the average growth rate in per capita income for the region as a whole. Moreover, from the peak of the last business cycle (1979-1982) only 42.3 percent (85) of the counties exceeded the average growth rate in per capita income for the region as a whole.

Question: Given the fact that many areas of the TVA area equal or exceed the average economic condition of the country, would it be wise to shift the focus into those areas of greatest need?

Answer: The TVA region comes nowhere close to meeting or exceeding the average economic conditions in the rest of the country. Although there are some pockets in the region that are relatively better off, the region also contains many of the most depressed areas in the country. TVA already targets many of its programs to these areas.

We believe it is very important to sustain the approach of targeting the areas of greatest need to receive direct assistance and areas of growth to receive technical assistance. This approach should provide the best payoff in terms of jobs created and be of greatest benefit to the areas of the Valley which need the greatest improvement. Even regional economies are not static, however, and a mixture of regional development programs and attacks on pockets of poverty are necessary to ensure that the fruits of development reach the intended and varied populations of the Valley region.

Question: Some suggest that no matter what amount of help in the way of dollars and other resources is provided to these distressed areas they will remain poor; consequently, the available resources should go to those areas where you can get the greatest impact. What is TVA's thinking and policy in this regard? What specific guidelines and procedures have to be established to carry out your policy?

Answer: TVA policy is guided by the mandate of the TVA Act for regional development and a desire for equity among all parts of the Valley. This is not to say that these efforts favor equity over efficiency. Rather, our programs to assist the poorest areas were conceived in an effort to stem the flow of Federal transfer support payments and establish an efficient, self-sustaining economy in these areas. It is our belief that the result will be less total Federal costs. At the same time, assistance to growth areas which is designed to encourage more efficiencies assures the continuation of linkages of economic support among rural and urban areas. The programs and policies needed to foster orderly and balanced physical, economic, and social development of the Tennessee Valley are in place.

LAND BETWEEN THE LAKES (LBL)

Question: The subcommittee has received correspondence which indicates that the direct and indirect economic benefit to the area surrounding TVA's Land Between The Lakes amounts to $200 million annually. Do you agree with this estimate?

Answer: Land Between The Lakes (LBL) is a national demonstration. The 170,000-acre area in Kentucky and Tennessee is the Nation's only outdoor laboratory which combines recreation, environmental education, and land stewardship to demonstrate the benefits of multiple-use management of public lands. As such, LBL is visited by people from all 50 States and several foreign countries each year. Total visitation in 1984 was over two million.

Over the years, LBL has established itself in professional circles for its research and demonstrations--for example, it was named by the National Science Foundation in 1983 as a component of the National Experimental Ecological Reserve network. That means LBL is one of 96 sites and one of only two sites on a major reservoir, which have been targeted for long-term field research for scientific use. Research efforts range from eagle restoration and testing fish attractors to a forest management program that has attracted the interest of the United Nations.

LBL training for professionals and preprofessionals is also nationally and internationally acknowledged. LBL has hosted professionals from a variety of countries, sometimes for on-the-job training programs lasting as long as six months. More than 800 students have been hosted from over 100 universities across the Nation as interns and curriculum enrichment programs for thousands of others have been provided. Working with private and public agencies and organizations, LBL staff have designed and implemented a variety of seminars for practicing professionals. For example, representatives from the U.S. Forest Services, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Park Service, and some 30 States have participated in training programs this year. The combination of research, demonstrations, and training makes LBL an important national asset.

However, LBL is the focus of a tourism industry that has been estimated to be worth at least $150 million annually. A 1981 study by Murray State University, Murray, Kentucky, placed the direct benefits of LBL to the local region at over $44 million annually. In addition, research by the Kentucky Tourism Cabinet shows that LBL visitors spent over $45 million in Kentucky alone last year. That spending generated $3.1 million in State and local tax revenues and created more than 2,000 jobs.

Question: If you assume that the $200 million figure is fairly accurate, why is it unrealistic to believe that State and local entities or the private sector would be unwilling to take over operation of LBL? Could LBL be operated by a non-Federal entity?

Answer: There is a relatively small acreage of Federal lands available for public use in the eastern portion of the Nation and LBL is the second largest contiguous unit of Federal property east of the Mississippi River. There is a need for open land for people to use, and LBL lies within a day's drive of over 75 million citizens.

The combination of educational opportunities, research, and demonstrations offered at LBL is unique and not practiced by other State, Federal, or private entities. It is unrealistic to expect that other entities would continue these broad applications that are inconsistent with their philosophy of single-use operational practices.

Federal operation of this area avoids the inevitable jurisdictional disputes that would arise if Kentucky and Tennessee were to attempt to jointly manage LBL.

Transfer as a national park, national forest, national refuge, or other national entity would also be ineffective. First, few if any Federal dollars could be saved if current LBL programs are continued. Moreover, the Administration has proposed reducing the budget of the National Park Service as well. In addition, no other Federal agency possesses or practices the integrated multiple-use philosophies applied at LBL. Because of this multiple-use philosophy and practice LBL is able to achieve significantly larger public benefits from its resources.

If LBL were to be transferred to the private sector, one could expect an entirely different kind of LBL. Every endeavor would of necessity be heavily commercialized in order to be profitable. Prime lakeshore properties would probably be sold for private use, thus excluding the general public which now enjoys LBL and its 300 miles of unspoiled shoreline. Future development and activities would be planned and implemented for maximum return without regard to the natural resources conservation goals that have been one of the focuses of TVA's efforts over the years. Furthermore several years of lead time would be reasonably required to solicit and evaluate sound private-sector proposals for development and operation of LBL.

In essence, no agency, Federal or State, or private entity is prepared to operate LBL, and it is impractical to believe that such arrangements could be made in the foreseeable future that would retain the multiresource discipline that has been the focus of and key to TVA's successful operations over the years.

Question: What are the annual operations and maintenance costs at LBL. Again, given the large economic benefit to the area, why is it unrealistic to ask that all or part of the annual operating cost come from non-Federal sources?

Answer: In fiscal year 1985 the operation and maintenance cost for LBL is expected to be $8,325,000. However, we also expect recreation and program user fees, timber sales, and hunter use permit sales to generate revenue of $1,075,000—an amount equal to 12.7 percent of those costs.

However, these figures do not reflect the total non-Federal contribution to LBL's operations. Law enforcement and wildlife management activities are currently supplemented by State agencies. Research and development projects are usually cosponsored and funded through cost-sharing arrangements. Over 80 college practicum students assist in managing campgrounds and providing visitor services each year through cooperative arrangements with universities. Volunteer projects at LBL last year ranged from rebuilding a boat ramp to "hacking eagles." Professional development programs as well as visitor programs are frequently conducted by other agencies or the private sector at minimal or no charge to TVA.

In 1984 LBL had over 130 cooperative arrangements that either saved LBL operating costs or expanded visitor opportunities. These arrangements were worth about $700,000.

It is very doubtful, given TVA's management philosophy for LBL, that the private sector could or would maintain LBL as we know it. If the private sector were provided the LBL land base, it would undoubtedly develop an entirely different kind of LBL. Every endeavor would of necessity be heavily commercialized. Prime lakeshore properties would be sold or leased and access to the 300 miles of unspoiled shoreline denied to the general public. All future development and activities would be planned and implemented based on their opportunity for making a profit.

Question: What has TVA done at LBL to increase user fees to recover more of the cost of park operations?

Answer: User fees for use of group camps, family campgrounds, and environmental education facilities are regularly evaluated to ensure comparability with similar charges in the region and are as high now as the current market will allow. A new fee structure was recently developed and established to recover direct program costs of special events and educational/skills programs conducted during the evenings and on weekends. A hunter use permit system was established in 1984 to help ensure that needed wildlife habitat improvements, such as open land maintenance, wetlands development, and additional wildlife law enforcement, can be maintained.

Question: Provide for the record a tabulation which compares the user fees charged at LBL for various activities to those charged at our national parks.

Answer: The only user fee common to both LBL and the National Park Service is that charged for overnight stays in developed campgrounds. In 1985 the LBL fee is $6 per site plus $1 for electricity. The National Park Service fee is $6 per site. LBL also operates two resident facilities for organized groups and manages a hunter use permit system which generates user fees. LBL user fees are projected to generate revenues of $825,000, or an amount equal to 9.9 percent of its 1985 budget of $8,325,000. A further comparison with the operation of the entire National Park Service reflects a projected income of $2,785,000 from 1985 user fees, less than 1 percent of its annual budget of $612,858,000. This comparison is, however, somewhat simplified from an operational point of view given the complexity of the National Park system and the variety of activities it conducts. In contrast, a component of that system, the Great Smoky Mountains National Park projects income of $655,000 from 1985 user fees, which is 8.9 percent of its annual budget of $7,385,000.

FISH, WILDLIFE, AND FORESTRY PROGRAMS

Question: How much is allocated to each of these areas for 1985?

Answer: The following table displays the fiscal year 1985 budget for each of these areas.

Program	In Thousands
Fisheries resource development..................	$590
Wildlife resources development..................	1,080
Forest resources development....................	2,335

Question: Existing Federal and State laws provide for the collection of revenues through license fees, excise taxes, etc. to conduct fish, wildlife, forestry, and related activities. How much did each of the seven TVA States collect last year through these fees, taxes, and contributions?

Answer: Due to the time constraints and relative lack of availability of such financial information, we are unable to provide the revenue information requested for all of the components of the seven Valley States. However, Tennessee receives a total of about $15 million from the various fish, wildlife, and forestry-related sources. Revenue from licenses, tags, permits, and stamps for hunting and fishing in the seven Valley States totals around $60 million annually, but, of course, only a small percentage of some of those States is within the Tennessee Valley. It should be noted that forestry revenue from the types of sources mentioned is very limited in all Valley States.

The primary use of the State funds is for law enforcement, management of State forests and wildlife management areas, stocking of harvestable fish and wildlife species, forest fire control, tree planting, direct assistance to landowners, and activities related to the monitoring and harvesting of these resources. TVA funds are used primarily for technology development, demonstration, and transfer; technical assistance; and activities related to management of TVA lands and waters. TVA has cooperative agreements with the seven Valley States and works closely with the various State agencies to complement rather than duplicate or compete with their efforts. Examples of TVA work in development, demonstration, and transfer of technology include wildlife restoration; forest management microcomputer applications; and introduction of fish species that can adapt to unique reservoir environments, including flow and water level fluctuations, to improve biological productivity. TVA works cooperatively with the States and others to get their programs going and then moves on, leaving the continuation of the established program to the other agency or to private organizations.

Question: How much was appropriated to the U.S. Fish and Wildlife Service, Department of Agriculture, and other Federal agencies in 1985 to undertake similar work? Provide a breakout by State for the record.

Answer: Because of the time constraints and the complexities associated with separating and comparing various budget components, it is not possible to provide the appropriations breakdown as requested.

However, it should be noted that other Federal agencies working in the Tennessee Valley concentrate most of their efforts on management and protection of their own lands; i.e., national forests, refuges, and parks. The U.S. Fish and Wildlife Service (USF&WS) also provides some enforcement of Federal fish and wildlife laws, has responsibility for animal damage control, and is involved with State fish hatchery operations. The U.S. Forest Service (USFS) is involved in broad research activities; provides limited assistance to the States for fire suppression, insect and disease control, and for their forest management programs; and collects and provides basic forest inventory statistics.

AGRICULTURAL AND RELATED RESEARCH

Question: There has been some discussion that the National Fertilizer Development Center and certain fertilizer programs should be taken over by the private sector. Has the private sector expressed any interest in this area?

Answer: No. The fertilizer industry already supports about two-thirds of the fertilizer introduction program through the purchase of TVA experimental fertilizers. It also bears the cost of facility changes required to implement TVA technology, along with the cost of developing markets for new products. Farmers and universities bear a large share of the cooperative agricultural development program costs in the Valley. The universities invest substantial staff and other resources in support of the program. Farmers often must make substantial new investments to accommodate new enterprises or management systems.

The fertilizer demonstration and development work in the TVA budget is the necessary linkage in the technology transfer chain.

Question: Is it realistic to consider such a transfer, and over what period of time?

Answer: The fertilizer industry has traditionally spent little on R&D efforts. The low percentage markup on fertilizer commodities and the cyclical nature of the industry have prevented any sustained effort. During the mid-1960s several new entrants to the business began R&D programs, but with the cyclical downturn of the late 1960s and early 1970s, these efforts were abandoned, staffs were abolished, and industry R&D efforts became insignificant.

The research effort of the fertilizer industry today is at a relatively low level and is primarily aimed at solving specific problems characteristic of a given company or operation. The industry effort is mainly short range and is geared to improving the efficiency and productivity of operating plants. In 1980, as in recent years, the industry spent only about 0.2 percent of sales on research and development as compared with about 3.0 percent for the chemical industry as a whole. This is further indicative of the void in the industry effort.

TVA fertilizer research and development is carefully planned and coordinated to complement the industry's effort. TVA work is longer range, higher risk, more basic, and is oriented to the broader aspects of industry needs and opportunities. The TVA program is managed in such a way that industry can readily adopt TVA's new products and processes with only a minimum of additional development work. However, there are present opportunities for enlisting private sector funding, and we are examining others where contractual operation of specific facilities or to accomplish specific objectives is mutually advantageous.

Question: The seven States of the Tennessee Valley region have received an average of $126 million per year since 1983 through the Extension Service and the Cooperative States Research Service for agricultural related research with each of the States receiving an average of $18 million annually as its share. Given this, why is it necessary for TVA to spend an additional $30 million annually on similar kinds of activities?

Answer: The $30 million to which you refer supports the national fertilizer development program, which helps to reduce the cost of food to American consumers. This is a national program and not a regional development activity. In fact, most of the money used in fertilizer development is spent outside the Valley region. Professional agricultural workers, farmers, and the fertilizer industry nationwide work with us to determine how new fertilizers can be used most effectively and to provide feedback for the development of new technology. TVA's annual agricultural development budget in the Tennessee Valley is only $5.7 million.

The $5.7 million Valley agricultural budget is directed toward demonstrating improved management and enterprise systems to increase farm income, conducting soil and water conservation programs, and developing marketing opportunities for farmers.

Soil erosion, particularly severe in some areas of the TVA region, has reemerged as one of the largest problems facing the Nation's agricultural economy. TVA conducts its soil conservation program in conjunction with the Soil Conservation Service and several State universities in the Valley region. The program is designed to stop soil loss, restore nutrient value to the remaining soil, and halt surface and groundwater pollution caused by erosion. This has been successfully demonstrated in west Tennessee, Mississippi, and Alabama and is readily adaptable to almost any area in the Nation that is plagued with the loss of productive topsoil.

Question: What does TVA do, or what is unique at TVA, that these other programs cannot accomplish?

Answer: The uniqueness of TVA is the comprehensive mission for resource development in the region. Other agencies only deal with technical servicing or financing, for example. The establishment of practical, action-oriented systems for resource development and use is unique to the TVA cooperative program.

The TVA agricultural program is an action program. It relies on research and education efforts of the universities. TVA helps concentrate resources of many groups on developing selected opportunities. We take an advocacy approach in accomplishing action goals and providing incentive to farmers to try something new. This action orientation is frequently not a part of the educational mission of the universities.

An example of the importance of TVA's unique role is in soil and water conservation and water conservation. Several agencies have traditionally conducted separate conservation programs. TVA called agency officials together and helped develop a multi-agency, multi-State approach to speeding up soil and water conservation activities. The results have been dramatic. Conservation and farm development plans have been brought together to help reduce soil erosion and at the same time improve farm income. Financial and staff resources of all cooperating agencies are jointly used in the conservation programs to avoid duplication and speed the acceptance of conservation measures.

The uniqueness of TVA is the comprehensive mission for resource development in the region without the constraints of strict program guidelines or limitations. Other agencies only deal with technical servicing or financing, for example, and must usually administer--not create--a detailed program designed by others. The research and Extension elements of the land-grant universities are envied the world over. However, the establishment of practical, action-oriented systems for resource development and use is unique to the TVA cooperative program.

Our program has an unequaled national and international reputation as one of few development efforts that has been effective. Officials from the U.S. and other nations visit TVA each year to study TVA's agricultural development program.

Question: From your perspective, would it make sense to consolidate all of this work in one agency?

Answer: One of the many virtues of our system of government is its diversity. We are demonstrating in our mode of operation that working with the people of this region and the other agencies which serve agriculture, a more cost-effective result can be obtained than if any agency were working the process alone. The TVA coordinated effort is the one place where the total resources of the region are brought to bear on any given problem. Thus, there is a synergetic or hybrid vigor from having cooperation among agencies that would not be possible if all agricultural programs were consolidated in one agency.

WATER QUALITY IMPROVEMENT INITIATIVE

Question: Last year funds were added to expand TVA's water quality improvement activities in the Tennessee Valley. Discuss briefly the problem and what TVA will be doing to improve the situation. Has a detailed plan been developed which addresses the scope and what will be done to correct the problem?

Answer: Even though progress has resulted from more controls over point sources over the past decade, water quality problems remain in the Valley. These problems result from nonpoint sources, lack of management of groundwater, toxic substances, and a developed reservoir system that is aging and receiving ever-increasing public use. We addressed all of these problems in our plan of action presented to the public and other agencies in 1983. This plan was entitled "Tennessee Valley Water Resources: A Study for the 1980's and Beyond." As directed in the plan, we are attacking deteriorating water quality on many fronts.

We are implementing our first reservoir water management plan, which is for Cherokee Reservoir; developing a reservoir water quality management plan for Boone Lake to reduce impacts to dissolved oxygen and reduce bacteriological problems; assessing the extent of potential impacts caused by toxic substances in northwest Alabama; and developing practical methods to reduce bacteriological levels in the Bear Creek floatway so that it can be reopened to public use.

Other water quality projects involve improving the quality of the releases from our reservoirs, developing water management plans for other reservoirs, demonstrating methods to improve reservoir conditions--especially for dissolved oxygen and aquatic weeds, demonstrating strategies to manage groundwater resources, initiating a monitoring program for water quality conditions throughout the Valley, assisting the States by demonstrating innovative methods for managing toxic substances and other wastewaters, and demonstrating methods to reduce impacts of nonpoint sources.

TVA serves as a unique national demonstration of integrated resource management. One example is the reservoir releases improvement program where TVA results have implications and application for dams throughout the Nation. Another example is our program to assist local communities protect their groundwater resource, a resource dependent on totally or in part by two-thirds of the Valley residents.

TVA expertise and data serve as a catalyst in assisting the States and local governments in correcting problems that are affecting water quality and limiting growth. This assistance provides great benefits for small investments. For example, at Chattanooga, a $20,000 TVA analysis of reservoir operating procedures and water quality saved the city $10 million on the cost of a needed expansion of its wastewater treatment plant.

On Cedar Creek Reservoir in Alabama a $15,000 project using infrared photography and soil suitability analyses led to the solution of a problem with failing septic tanks and the lifting of a State moratorium on future development of four subdivisions.

Similar results have been obtained in addressing numerous water supply and pollution problems. TVA projects emphasize the use of practical and technically sound methods, cost-effectiveness, environmental soundness, and reduction of impacts to various water uses.

Since 1936, when TVA conducted its first evaluation of water quality in the Tennessee River system, reliable data has been the cornerstone of our success in resource management. TVA requires current data on water quality that are essential for developing and managing the water resources. These data are provided to industrial planners seeking suitable plant sites, to regulatory agencies trying to enforce pollution laws, to municipal water supply and wastewater treatment operators needing to know the extent of treatment required, and to the general public wondering which areas are safe for water-contact recreation. A detailed plan has been developed to correct water quality problems as well as to provide long-term monitoring and water quality planning for users of the TVA reservoir system.

Question: What budgetary and related resources will TVA need over the decade to accomplish its goal? Provide for the record the annual budgetary requirements through completion.

Answer: Over the years, the emphasis of TVA's water resources mission has shifted from resource development to effective management of the integrated reservoir system. Reservoir release schedules have been optimized to provide maximum benefits for multiple reservoir uses. Investigations to determine the processes controlling reservoir water quality and the effects of varying flows on those processes have increased our understanding of how the system behaves and have provided a basis for effective water quality management.

Over the next 10 years, a major TVA goal will place emphasis on managing the quality of water in our reservoirs. We will continue to develop and implement plans which identify the most important issues for each reservoir and recommend actions to protect and improve water quality. Effective water management requires a vigilant surveillance of water quality conditions throughout the Valley. Early detection and correction of water quality problems will be essential to future economic growth. A major component of this effort will be to demonstrate effective programs to protect water quality, including groundwater protection, agricultural nonpoint source control, and control of urban runoff and combined sewer overflows. Technical assistance to States and local communities to identify wastewater disposal methods which have minimum impacts on reservoirs, to identify water supply limitations, and to promote correction of critical water pollution problems complete the menu of TVA programs for effective water resources management. These programs will require an average of $7 million per year for maximum efficiency and benefits.

Question: What are the State and local responsibilities in this area? Don't existing laws place much of the responsibility for water quality on State and local jurisdictions?

Answer: Yes, existing laws make the States responsible for developing and enforcing water quality regulations. Local governments and private interests are responsible for implementing the requirements of these regulations. TVA's role is twofold in identifying and correcting problems that impact the quality of water in our reservoirs thus affecting beneficial uses or endangering public health. Specifically, TVA has a responsibility for protecting the quality of its reservoirs to provide the greatest possible benefit to the region; making TVA data on operation of the reservoir system and the condition of the water resources available for decisionmaking purposes; and using TVA expertise and data to assist the Valley States and communities in identifying water quality problems. Our other role is to help solve problems and demonstrate solution concepts for issues that are not incorporated into existing regulations such as nonpoint sources, groundwater, residual toxics, and innovative and alternative regulatory strategies.

Early in its history, TVA realized that construction and operation of the reservoir system would have a variety of effects on water quality and that full benefits could not be achieved unless water quality were protected. Since streamflow is the single most important variable influencing water quality and TVA must regulate flows for the multiple purposes of the reservoir system, only TVA can adequately ensure that water quality is maintained in the system. For this reason, TVA must consider water quality objectives and impacts in the operation of its dams. TVA conducts a nationally recognized program to manage reservoir releases and potential impacts on downstream water uses. TVA also works cooperatively with State regulatory agencies and wastewater dischargers to protect reservoir water quality. Reservoir water quality management plans for seven TVA reservoirs are currently being developed and implemented.

Question: What is the State of Tennessee doing to enforce existing water quality laws? In your view, as a professional agency with an interest in water quality, are these efforts adequate?

Answer: Staff limitations prevent the State of Tennessee from effectively dealing with all of the pollution control law violations which occur. However, where a substantial pollution problem has occurred such as at Boone Lake or Oak Ridge, the State has responded rapidly and has aggressively pursued corrective action. Unfortunately, in the case of municipal system compliance, implementation has proceeded slowly despite aggressive enforcement. The problem occurs throughout the Nation where municipalities are unable to fund wastewater system improvements especially where infiltration, inflow, and combined sewer overflows are a large part of the problem.

A good example of the dilemma facing many communities occurred at Lexington where the State of Tennessee was using a sewer connection moratorium as an enforcement tool. When the city developed plans for correcting the problem, the estimated residential sewer bill would have increased to $50 per month which residents of this rural community would have had difficulty paying. TVA, the State, and the city worked together on an alternative regulatory approach involving low-flow augmentation from a TVA lake to solve the city's problem. This has held sewer bills to a more reasonable $20 per month. In short, the solving of problems requires more than enforcing the law, it requires adequate data, and in many instances solution techniques must be demonstrated to ensure cost-effectiveness. TVA data, information and demonstration results regulatory programs.

Agricultural nonpoint source pollution is a widespread problem in Tennessee, yet control over agricultural related activities is explicitly exempted from the Tennessee Water Pollution Control Law. Because of this exemption Tennessee has historically relied on programs in the U.S. Department of Agriculture (USDA) for controlling agricultural nonpoint sources. These programs have been inadequate for dealing with water quality problems and more emphasis is needed. TVA, the State, and USDA have joined forces in a demonstration of how animal waste disposal problems in the

Duck River can be handled. This demonstration can serve as a model for improving the USDA programs.

These examples demonstrate that regulatory efforts alone do not correct water quality problems. In many instances either the technology or its application is insufficient without either better defining the problem or modifying the technology. It is in these roles that TVA serves to correct regional problems while setting an example for the Nation.

UNOBLIGATED BALANCES

Question: Bring the Committee up to date on the status of TVA's unobligated balances carried forward into 1985 and the amount you expect to carry over into 1986.

Answer: The amount of unobligated balances carried forward into 1985 ($34 million--most of which was associated with large capital projects such as the north Alabama coal-to-methanol project, Pickwick Lock, and Columbia Dam) was the lowest in the past six years. At the end of 1985 we anticipate that those remaining funds associated with the north Alabama coal-to-methanol project will be unobligated. This will amount to no more than $9 million. In addition there may be lesser amounts resulting from a change in the method of financing capital modifications at multipurpose reservoir facilities and additional savings at Pickwick Lock.

MURPHY HILL, ALA., COAL GASIFICATION PLANT

Question: Discuss briefly the recent decision relating to the Coal Gasification Plant at Murphy Hill, Alabama. How much has been spent to date and what do we have to show for that expenditure?

Answer: Early this year, the members of the North Alabama Coal to Methanol Consortium and the TVA Board reviewed the project in light of the current energy situation, the reduced funding for synfuels available to the Synthetic Fuels Corporation (SFC), and the SFC's continuing lack of support for the north Alabama project. In each of these areas it was clear that the chances of the project being completed were very low, making it imprudent for either the Consortium or TVA to continue development. Conditions had changed significantly in each area since last June when the Consortium and TVA decided to reapply under the SFC's Fourth General Solicitation. Oil and methanol prices continued to erode leading forecasters to lower the projections for product prices during the Project's operating period. A significant portion of the SFC's funding was rescinded, limiting its ability to fund additional projects. And the SFC's policy shift toward technology diversity favored projects using as yet unproven coal gasification processes rather than the demonstration of proven processes as contemplated for this project.

To date (March 1, 1985) a total of $111.9 million has actually been expended on the project.

Most of the money spent on the north Alabama project has gone to develop technical information needed for the detailed design, construction, and operation of a coal to methanol plant at Murphy Hill, Alabama. As in all large, complex projects it is important to do adequate up-front planning. The initial efforts involved conceptual designs for several different technologies, environmental studies, and large-scale coal tests at Koppers Totzeck (K-T) and Texaco plants in Europe. Results of these efforts have been published.

Subsequent engineering activities have focused on preliminary engineering designs of the following:

- o full module (5,600 tons of coal per day) K-T plant producing methanol
- o reduced-size (3,400 tons of coal per day) K-T plant producing methanol
- o reduced-size (3,400 tons of coal per day) Texaco plant producing 213 million gallons of methanol per year

These engineering designs are extensive and meet the SFC's requirements for Level II/III designs and estimates needed to enter into definitive contracts. The results of this work have been carefully documented and are available if and when an emergency arises and this country must move agressively toward energy independence, under appropriate proprietary restrictions, if any organization intended to build a similar plant in the future.

In addition to the engineering work, TVA prepared the Murphy Hill site for use as a major synthetic fuel plant site. This work is consistent with its use for many other types of facilities. This includes retention ponds, causeways for docks, and a barge slip for receiving large loads. Site stabilization activities being undertaken this year will preserve these features while returning the site to an environmentally stable condition. As part of this effort, the highways around the site were upgraded.

TVA also conducted tests of methanol/cosolvent/gasoline blends in automobiles. The results of these tests, conducted in cooperation with industry, are being published.

This project should now properly be considered as part of this Nation's defense energy reserve.

Question: How much of the $125 million one-time appropriation remains unobligated and unspent? How much will be carried forward into fiscal 1986?

Answer: A total of $111.9 million has been expended through March 1, 1985. We currently estimate that approximately $4.2 million will be required to close down the project. Most of these additional funds will be used for the site stabilization. This will result in a total of $116.1 million having been spent or obligated by the end of fiscal year 1985. The remaining funds, $8.9 million, will be available for alternative uses to be established in consultation with Congress and the Administration.

Question: Explain in more detail what the effect is of placing the project in "defense energy reserve status." What procedures and conditions would be required to reactivate the project and who makes the decision?

Answer: Placing the project in defense energy reserve status involves two major sets of actions involving engineering and the site. The engineering work completed to date is being carefully documented and placed in readily accessible files. The TVA staff is preparing a final report which will serve as a guide to those who would reactivate the project. To maintain the key elements of the project, TVA expects to keep the architect/engineer and construction manager contracts open at a zero expenditure level. This will keep the organization and files of the key participants in the project available for reactivation. As part of the final engineering effort, TVA and the architect/engineer are assessing the design changes necessary for the plant to produce the distillate fuels now being used by the Department of Defense.

The Murphy Hill site is being stablized in an environmentally acceptable condition and will be maintained as part of TVA's inventory. Specifically the topsoil stockpiled earlier will be spread out and planted with grass and tree seedlings. The retention ponds, causeways, and barge slip will be retained.

The project could be reactivated on a moment's notice.

AGENCY LOBBYING

Question: The subcommittee is aware of news reports that TVA is planning protests against the proposed budget cuts and is mobilizing a nationwide fight against any cuts. Has the TVA Board or staff directly or indirectly participated in the organizing or planning of any demonstration or protests related to the 1986 budget reductions?

Answer: To our knowledge neither the TVA Board nor staff have organized or planned any prohibited demonstrations or protests related to the fiscal year 1986 budget reductions proposed by the Administration. We are aware of the anti-lobbying provisions of law, and have always sought to follow them. Of course, many persons and organizations in the Valley--and indeed many outside the Valley--were very troubled when they learned of the proposed reductions and requested more details from us about the nature and effect of such reductions. The personal opinions of the Board members on the proposed reductions are also well known. We know some employees also spoke out against the reductions in their private capacities as citizens. Aware of employees' concerns, we sent out a notice to all employees reminding them of the applicable laws and policies in this area.

Question: Have any appropriated or power funds been used to support such an effort?

Answer: Certainly neither power nor appropriated funds have been spent for any unlawful lobbying activities.

COLUMBIA DAM PROJECT

Question: I understand that OMB included in their passback to you on the 1986 budget a request for a new benefit/cost study for Columbia Dam. Please inform the committee how you propose to respond to this request.

Answer: OMB specifically stated:

> In view of cost escalation and continuing environmental concerns, TVA should initiate a new benefit/cost study of the Columbia Dam project. The study should be conducted in accordance with the Economic and Environ-

mental Principles and Guide lines for Water and Related Land Resources Implementation Studies (March 10, 1983). Sufficient unobligated balances are available to conduct the study.

TVA's present schedule is to perform preliminary studies in the next two months and complete a draft analysis by the first of August. Before a final document is issued, we plan to afford members of the public and opportunity to comment. We would hope to complete the process and have a final report to OMB by the end of the fiscal year.

QUESTIONS SUBMITTED BY SENATOR SASSER

FUNDING HISTORY

Question: Mr. Dean, since fiscal year 1980, how much has your budget been cut?

Answer: Excluding various special-purpose appropriations, TVA's budget has declined from $162 million in 1980 to about $130 million in 1985 in current dollars.

Question: How much is that in real terms?

Answer: Forty percent.

REGION ECONOMIC CONDITION

Question: What is the per capita income of the TVA region?

Answer: In 1982 per capita income in the region was $8,505.

Question: What is the per capita income of the Nation?

Answer: In 1982 per capita income in the Nation was $11,107.

Question: What is the poverty rate for the region?

Answer: The poverty rate in the TVA region is estimated to be about 22 percent.

Question: What is the poverty rate for the rest of the Nation?

Answer: In 1983 the poverty rate for the Nation was estimated to be 15.2 percent.

Question: What is the unemployment rate in the region?

Answer: In December 1984 the unemployment rate in the 201-county region was 9.3 percent.

Question: What is the unemployment rate for the Nation as a whole?

Answer: In December 1984 the unemployment rate in the Nation was 7.2 percent.

Question: Has TVA ever computed the impact of Reaganomics on the region as compared to the rest of the country? Tell us what you found.

Answer: Our economists have estimated the impact of recent national economic policy on the Tennessee Valley. Since about 1980 a relatively restrictive monetary policy has kept real interest rates at at about twice as high as their historical averages. This has restrained economic growth in interest-sensitive sectors of the economy directly, as well as restrained growth in the export-oriented sectors of the economy indirectly by keeping the exchange value of the dollar high.

The restrictive effects of monetary policy have been neutralized to some extent by expansionary fiscal policy consisting of tax cuts and increased defense spending (partially offset by cuts in nondefense programs). The deficits that have resulted from this policy also have helped keep both interest rates and the exchange value of the dollar abnormally high.

The Tennessee Valley--as well as States in the industrial Midwest--have been disproportionately affected by the monetary, fiscal, and trade aspects of national economic policy.

With economies dependent upon mature, interest-sensitive manufacturing and agriculture (both increasingly losing markets to foreign competition because of the strong dollar) these States have received much more than their share of the negative consequences of high real interest rates.

Conversely, the region received much less economic stimualtion from the tax cuts and increased defense spending than did the Nation as a whole, while it felt the negative erfects of nondefense spending cuts more than the rest of the country. Our economists estimate that the net amount of economic stimulation the tax cut and associated expenditure changes created in the region as only about 40 percent of the amount experienced nationwide (see attached table).

The reason for this is simply that more of the citizens in the Tennessee Valley are in lower tax brackets (and more have incomes so low they pay no taxes) than is the case nationally, and the region contains a relatively small number of defense industries.

Impact of Policy Changes in Federal Taxes and Expenditures from 1981 Base Year
(Dollars Per Capita)

United States

	1982	1983	1984	1985
Gains:				
Tax savings	213	373	486	655
Added defense	37	80	157	235
Losses:				
Program cuts	121	126	186	178
Net impact	129	327	457	712
Net impact as a percent of U.S. per capita income	1.1	2.7	3.4	4.9

TVA Region*

	1982	1983	1984	1985
Gains:				
Tax savings	120	213	278	374
Added defense	22	47	93	139
Losses:				
Program cuts	120	125	184	178
Net impact	22	135	187	335
Net impact as a percent of U.S. per capita income	0.2	1.1	1.4	2.3
Ratio of net impacts:				
TVA region to Nation	0.17	0.41	0.41	0.47

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*From the Economic Outlook, 1983, Chief Economist Staff, Tennessee Valley Authority, calculated for 201 counties encompassing all of Tennessee, the northern 16 counties in Alabama, the northern 13 counties in Georgia, the northeastern 30 counties in Mississippi, the western 11 counties in Virginia, the western 15 counties in North Carolina, and the 21 southwestern counties of Kentucky.

Question: If I might now be permitted, I would like to have TVA point out some of the many programs undertaken by the agency which have a broader national impact.

Answer: TVA addresses itself to the most important natural, agricultural, economic, and human resource issues facing the Valley region in the most cost-effective and efficient manner. We consciously plan these efforts in a way that significant results can be replicated in other parts of the country. This involves careful evaluation and an effective information/technology transfer mechanism.

In addition, the fact that the national fertilizer development program, Land Between The Lakes, and reservoir management programs are either national in scope by design or serve in lieu or other Federal agencies' efforts reinforces the national character of our programs.

Examples of TVA national demonstrations having distinct regional benefits cover a wide range. They involve major initiatives, such as the atomospheric fluidized-bed combustion (AFBC) project aimed at achieving cleaner, more efficient burning at coal-fired power plants. Other accomplishments have been made in less visible areas, such as new low-cost techniques in underwater archaeology photography, seeding mine reclamation sites, and artificial reproduction of endangered mussels.

As a part of this effort, we have established cooperative agreements between TVA and the National Rural Center dealing with the training of rural community leaders. We are also working with the National Rural Electric Cooperative Association so that NRECA can emulate nationally our effort to use rural electric cooperatives to stimulate economic development and job creation activities.

In order to avoid duplication with other Federal and State efforts, we have in place or are working toward agreements with several agencies within the Department or Agriculture, the Environmental Protection Agency, the Department of State, the Department of Commerce, the Department of the Interior, the Department of the Army, the Appalachian Regional Commission, and the National Cooperative Bank, as well as the seven States of our region. The agencies with whom we cooperate pick up ideas from our research or action programs that can be used elsewhere in the United States and even abroad.

Core components of most TVA programs are fundamentally demonstrations with potential national significance. Examples of this work include:

Fertilizer Technology Introduction - TVA's fertilizer technology introduction program is a prime example of spending tax dollars to support an effort that benefits all consumers across the Nation through the widespread dissemination of fertilizer technology. This technology is derived from research, development, and demonstration facilities located in the world's only National Fertilizer Development Center, owned and operated by TVA at Muscle Shoals, Alabama. Critical feedback from cooperating universities, fertilizer manufacturers, and distributors serves to upgrade manufacturing processes and products, and thereby allows chemical fertilizers to be sold in the marketplace at lower cost to the farmer. These efforts keep food pries down and ultimately benefit every consumer.

Environmental/Energy Education - The planned network throughout the Valley region of 17 self-sustaining centers for expanding support to local schools is just over halfway along in its development. At this time the States of Oklahoma, Wisconsin, California, South Carolina, Florida, and South Dakota have also initiated systems modeled after TVA's concept.

Hardwood Fuels Research - This TVA program has national demonstration application since the hardwoods used in the process to produce ethanol from wood extend through the Appalachian area, up the east coast, and into the Ozark region. The research information developed will also be suitable for use with abundant western softwood trees. Marginal open lands also exist in many areas outside the TVA region which could be more effectively used to provide biomass feedstock for the cellulosic hydrolysis process. This type of program effort offers a unique opportunity in areas of abundant biomass resources to increase economic development activity and generate jobs.

Reservoir Releases Improvements - TVA's investigation of methods to increase dissolved oxygen levels in water releases from high dams, while not yet complete, has already resulted in a Corps of Engineers aeration project at their Clarks Hill Dam using techniques developed by TVA. Likewise, another Corps project is under consideration that will construct a reregulating weir similar to the one TVA completed this year on the Clinch River. TVA's current work in dissolved oxygen problems in some smaller tributary reservoirs has direct application for many private or municipal reservoirs and some western projects managed by the U.S. Bureau of Reclamation.

Forestry - TVA has been an early leader in applying microcomputer-assisted techniques to improved forest management. These tools are already being employed by Valley region State forestry departments, the U.S. Forest Service, and private consulting foresters. To broaden participation and activities, much or this development is being "spun off" through the independent Forest Resources Systems Institute.

Skills Development - In order to create a more employable Valley work force, TVA has been working with States to research and demonstrate new state-of-the-art education and training programs. This work has already resulted in the development or an automated "factory of the future" to retrain employees, and a program to improve the instructional capability of math and science teachers which has been recognized as one of the best innovative programs in the Nation.

Agricultural Resources Development - Two activities within this program have tremendous potential for use on a national scale. The first soil conservation, has been successfully demonstrated in west Tennessee, Mississippi, and Alabama and is readily adaptable to almost any area plagued with the loss of productive topsoil. TVA's program is designed to stop soil loss, restore nutrient value to the remaining soil, and halt surface and groundwater pollution caused by erosion. The second, farm market development, which is designed to aid the small farmer, could have national demonstration potential in any area where logistics prevent the delivery of quality products on time from the producer to the consumer. TVA's program includes helping increase volume through existing markets, developing marketing skills for managers and farmers, and increasing the efficiency of the marketing system. Specific projects include (1) assistance to vegetable growers in organizing cooperatives, (2) further development of federated cooperatives to improve communications, supply market intelligence, and pool orders, and (3) development and implementation of programs to increase market hog production in the region.

Townlift - TVA's integrated approach to revitalization of downtown areas of rural communities is being applied in the State or Georgia by communities outside the Valley region. Townlift staff are in their third year of a contractual agreement with USAID as technical advisors to apply broadly based community development techniques developed by TVA to Southeast Asian and African cities.

Tick Research - TVA and the Department of Agriculture are engaged in a joint effort at LBL to determine the most effective way to control tick populations in large areas such as parks, wildlife refuges, and recreation areas. Results could also be beneficial to management of private lands. In addition, TVA is cooperating with commercial producers of repellent to field test and assess chemical methods of tick control.

WATER QUALITY IMPROVEMENT PROGRAM

Question: Mr. Dean, water quality programs in the OMB Budget have been virtually eliminated. I am particularly familiar with one or the projects which would be undertaken by the TVA under the budget TVA originally submitted to the Administration. That project provides technical assistance to demonstrate water quality improvements in the Bristol, Tennessee-Virginia area. Now this activity certainly benefits my constituents, but it also has a very desirable and important spin-off: it has a national value as well. So, I would like to ask Chairman Dean to explain how this expenditure would have a national benefit.

Answer: The water quality problems impacting Boone Reservoir are a composite or the types of problems the entire Nation faces. These problems result from municipal and industrial point sources, combined sewer overflows and urban runoff, agricultural nonpoint sources, failing septic tanks, and inadequate sludge disposal. As a result, Boone is the most eutrophic reservoir in the TVA system, it is contaminated by bacteria, unfit for recreation, and plagued with frequent fishkills. The juxtaposition of these problems in one small geographic area is one aspect of the Boone project which we believe makes it of national interest. The complexity and the number of jurisdictions involved, including two States, two EPA regions, four counties, and five cities, demands a comprehensive approach that goes far beyond routine water quality management efforts.

The State of Tennessee has taken the essential regulatory steps to improve overall conditions in Boone Reservoir. However, further regulatory actions without adequate evaluation could push corrective actions beyond the point where water quality improvement is commensurate with cost.

TVA efforts will demonstrate incremental corrective action while evaluating resulting improvements. Modeling of these processes can then predict the results to be achieved by additional pollution control. These efforts will focus on the unregulated nonpoint-source problems also. Participation can ensure that actions taken at Boone will not only improve water quality, but will do so in a cost-effective manner.

The Boone project will demonstrate how Federal, State, and local governments and the public can cooperate in finding solutions to problems which are of both a highly technical and a highly emotional nature, and will be transferrable to thousands of reservoirs nationwide. In addition, one specific component of the Boone project, the correction of combined sewer overflows, is of national significance. Hundreds of communities across the Nation have combined sewer problems. The Boone project will provide information which could be used by these communities and the regulatory agencies in deciding how to deal with this problem.

ECONOMIC AND COMMUNITY DEVELOPMENT

Question: Many outside observers look at TVA's economic and community development programs and say, "Those programs are strictly parochial; they have no national benefit." Chairman Dean, how do you respond to that criticism?

Answer: TVA uses the Tennessee Valley as a "living laboratory" to test new solutions to problems affecting small communities and rural areas throughout the Nation. For example, TVA's economic and community development programs focus on developing solutions to problems in areas such as rural economic development, solid waste management, and water supply and conservation. These projects are structured so that they can be replicated in other areas of the Nation.

Recently TVA signed a memorandum of understanding with the National Association of Towns and Townships' newly created National Center for Small Communities. Under this agreement the association and TVA will work together to do cooperative research, jointly develop and demonstrate innovative approaches to solving local problems, and disseminate this information to communities throughout the Nation. We have also assisted the National Rural Electric Cooperative Association develop its National Rural Jobs Creation Campaign and will assist in its implementation across the country. We believe that such activities clearly reflect the value of our economic and community development programs to the Nation.

Question: I would like to ask the Chairman of the TVA if he would take the TVA budget and go item by item and provide for the record an assessment of the national impact of TVA programs.

Answer: All areas of TVA programs directly or as demonstrations create a national impact. Most activities clearly focus on issues at regional significance but TVA's selection of projects considers the usefulness to areas outside the Valley region as well as Valley needs.

TVA's natural resource program contributes to the national inland water transportation, flood control in the Tennessee and Mississippi River valleys, water and reservoir quality improvement technology, Federal and other public land management innovation, forest resource management technology, wildlife restoration and migratory waterfowl feeding areas, acid rain research, and topographic mapping.

Economic and community resource programs have the long-term objective of maximizing the potential economic contribution of the Valley region to the Nation while reducing present Federal transfer payments coming into the Valley. In accomplishing this TVA is developing techniques in industrial skills training, community organization, solid and hazardous waste management, existing industry growth, and floodplain management that have been and are being applied outside the Valley region where similar problems exist.

Agricultural resources development activities concentrate on problems and opportunities of the small farm. Cooperative efforts in controlling soil erosion, farm market development alternatives, and demonstration farms have contributed to the evolution of programs elsewhere.

National fertilizer development activities are a major source of support to the American fertilizer industry. The multitude of TVA developed fertilizers are to a great degree responsible for increased farm productivity of home and aborad. TVA research is also responsible for progress in improving fertilizer production efficiencies as well as effectiveness.

FUNDING FREEZE

Question: "A freeze at the 1985 level" has been suggested as a fair appropriations principle for agencies in fiscal year 1986. What is this level in dollars for TVA; explain why this amount is the correct interpretation for TVA.

Answer: The language for TVA's 1985 appropriations says in part:

> . . . for the purpose of carrying out the provisions of the Tennessee Valley Authority Act . . . $129,547,000 to remain available until expended, of which $9,547,000 shall be derived from prior year unobligated balances . . . .

In its report on the TVA appropriation, the conference committee makes clear that $129,547,000 is Congress' determination of the proper program level for TVA during 1985. In determining how to finance that program, the committee made use of an unobligated balance of $9,547,000, leaving only $120,000,000 in new budget authority necessary to fund the approved program. The record is clear that the higher program level was the intent of Congress.

In order to truly "freeze" the TVA program at the 1985 level, 1986 funding should total $129,547,000. This can be accomplished either by providing this total amount as new budget authority or through some combination of new budget authority and whatever amount of unobligated balances might be available to TVA at the end of fiscal year 1985. An example of the latter would be new budget authority of $120,000,000, the same as last year, supplemented with $9,547,000 of unobligated balances associated with the north Alabama coal-to-methanol plant, additional savings from Pickwick Lock, and savings in appropriations resulting from a change in the method of financing capital modification at multipurpose reservoir facilities.

QUESTIONS SUBMITTED BY SENATOR STENNIS

SPECIAL OPPORTUNITIES COUNTIES AND CITIES

Question: Chairman Dean, last year this Committee added over three and one-half million dollars to your Special Opportunities Counties and Cities program for 1985 to address the large economic problems in many rural Valley counties. What is the status of your work in that program.

Answer: TVA and local cooperators have already developed projects for 1985 that will utilize most of this year's SOCC budget and will develop projects to utilize the rest in a matter of weeks. It is important to recognize that considerable local planning and preparation is required by TVA prior to the actual expenditure of funds. It is building this strong local base that has been a key factor in the program's effectiveness. In 1983 and 1984, for example, the SOCC program had about a $2.2 million budget. In 1983 we can account for about 1,000 jobs directly as a result of the program, in 1984 about 1,500 jobs. We think that for every two of these jobs created directly, one additional job is produced in the community. With our SOCC budget of $5.6 million in 1985 we expect to see a total of about 5,000 new, private sector jobs.

Question: Your budget request eliminates all of TVA's economic development activities in 1986. Does the Valley no longer need these programs?

Answer: These programs are very much needed by the Tennessee Valley region and have value to the rest of the Nation as well. They demonstrate ways Federal money can more efficiently be used to resolve economic problems in pockets of poverty around the U.S. This assistance will accelerate the national recovery and reduce Federal transfer payments. The Valley region still faces major current and chronic problems of poverty, unemployment, and a danger of being left out of the changing future economy.

Question: Why are the Valley States not able to show greater participation in the improving national economy?

Answer: First, the Valley economy has a higher proportion of traditional manufacturing in its economic base than does the U.S. economy as a whole, and this manufacturing base plus Valley agriculture are depressed.

Second, the principal areas of growth in the U.S. economy--knowledge-intensive, defense, service sectors--represent a smaller proportion of the Valley economy. We have growth in these areas, but at a much slower rate.

Third, national economic policies have penalized the region relative to the rest of the U.S. Many firms that form the Valley's economic base are mature firms serving interest-sensitive markets that were hit hard by the high real interest rates of the 1980s. Likewise, many firms have had intensifying foreign competition from the "strong dollar." Worsening this situation, the economic stimulus to have come from tax cuts has proved to be much less than in other regions because of a much larger proportion of the Valley population is in the lower or zero tax brackets.

Fourth, we also have proportionately fewer defense-related industries than the national average. It is noteworthy that parts of the Valley that benefit from the increases in defense spending, such as the Huntsville, Alabama, area, are doing relatively well.

Finally, the Valley has a larger share of its population in nonmetropolitan areas, about 50 percent versus 20 percent nationally, and rural areas have been very slow to recover. In the Valley, employment in rural areas is only about 96 percent of the level it was in 1979.

Questions Submitted by Senator Byrd

LAND BETWEEN THE LAKES

Question: Does TVA have an analysis of the impact that the sale or LBL would have upon the western Kentucky-Tennessee area, if so, could you provide this information to the Committee?

Answer: At the present time, TVA has no analysis of the specific impacts that such a sale would have on this area of the Tennessee Valley region because this is the first time such a proposal has been submitted by the Administration to Congress or otherwise proposed on a formal basis. Such a dramatic action would, of course, have been inconsistent with the demonstration-oriented purposes for LBL which have been carried out by TVA since LBL was created.

The Administration did not request us to perform such an analysis before transmitting this proposal.

Question: In your original budget request for fiscal year 1986, did you plan to fund LBL?

Answer: Yes, TVA's funding request for LBL for fiscal year 1986 was equal to the fiscal year 1985 level it received plus a small increment covering impacts of current inflation.

Question: How much was requested for LBL in this proposal and what parts of the current operation there would it have sustained?

Answer: TVA's fiscal year 1986 request for LBL was $7,580,000--$95,000 for capital investment and $7,485,000 for operations. This level of capital funding would have only provided for replacement or various kinds of labor-saving equipment. It would not have provided for the expansion of any facilities. The operations component of the requested budget would have kept the project at its present level of operation. This level would still have not permitted sufficient maintenance of roads and facilities or full-time operation of all facilities and programs.

Question: What is the minimum amount of money that TVA would need to operate LBL and what parts of the current operation would it support?

Answer: The fiscal year 1985 level of funding, $7.25 million, is the minimum amount on which LBL could effectively operate its present programs and facilities. Further reductions or funding would result in the skeletal operation of facilities and the deferral of maintenance at these facilities. Any further reductions would be at the expense of visitor services and facilities would begin to deteriorate.

SUBCOMMITTEE RECESS

Chairman Hatfield. On March 7, we will receive testimony from the Secretary of Energy on the DOE budget request before this subcommittee. The subcommittee will stand in recess until that time.

[Whereupon, at 1:50 p.m. Tuesday, March 5, the subcommittee was recessed to reconvene at 10 a.m. on Thursday, March 7.]

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